

EARTH GARDEN

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No 19

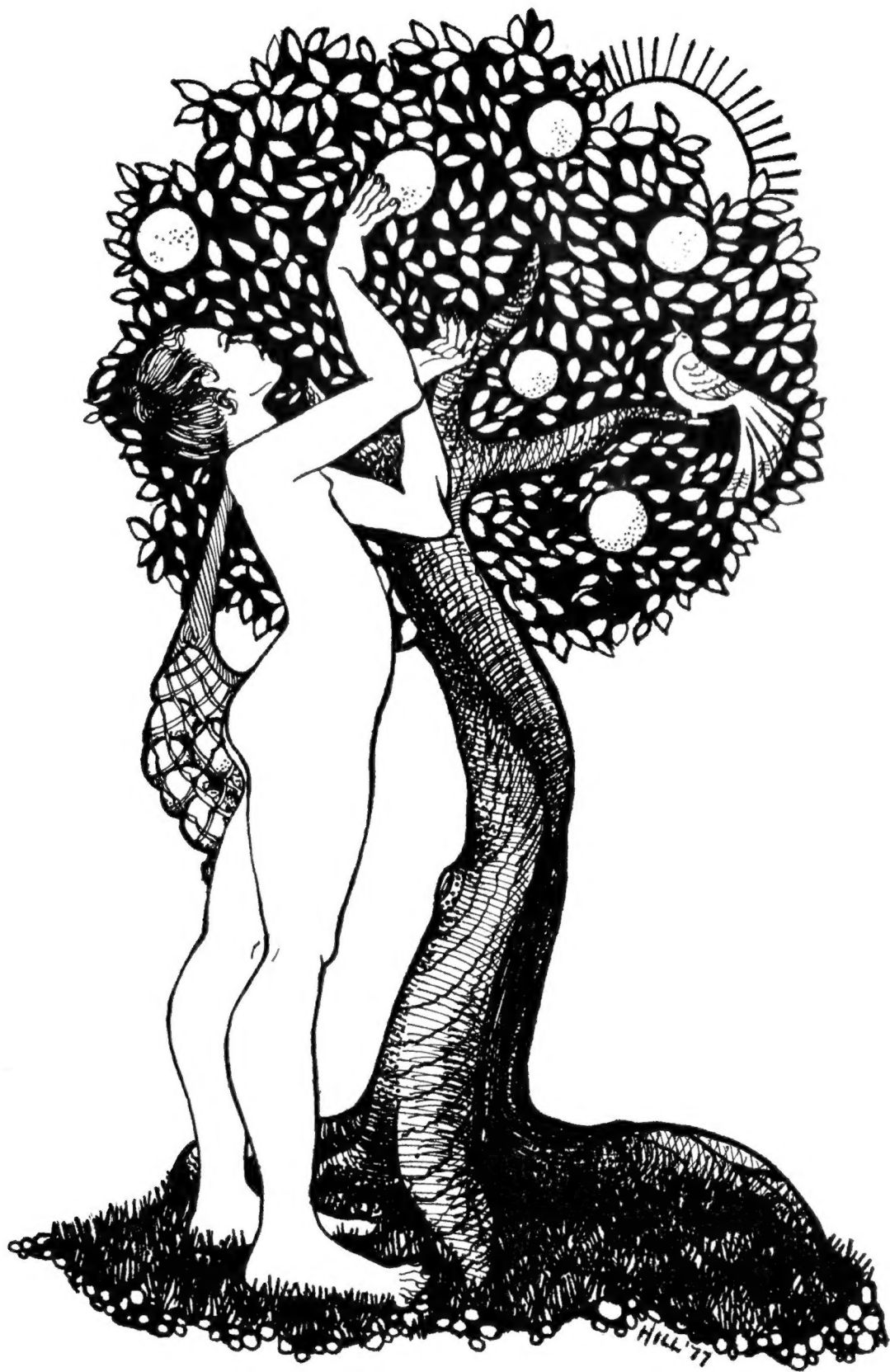
JULY-SEPT, 1977

WOOD HEAT

\$1.50

WINTER

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Earth Garden, established in 1972, presents a range of natural lifestyles. It is intended as a key to sources, practical ideas, alternatives and self-sufficiency.

It is concerned with non-polluted living and growing, the back-to-the-earth movement, surviving in the city, the bush, food and diet, and the inner changes which follow when you are in tune with nature.

Let us lead you up Earth Garden's path to the good life.

We don't have advertisements in Earth Garden. That way we're not influenced by any vested interests. Books, places and products recommended are those we think relevant.

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EARTH GARDEN No.19

The Cover

Top: Cauldron & spit — from the *Bayeux Tapestry*, about 1084.

Left: Kachelofen (tile oven) — from *Die Freiheit und der Priester*, printed by Hans Folz, Nuremberg, 1482.

Right: Bakery — from *Assissa Panis*, 1266 (Corporation of London).

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earth people write

Dear Keith & Irene,

As we progress on our 22-acre block and require information on various topics, we are discovering the full value of your magazine. We were very pleased to see plans for your 'Access' project and would like to ask fellow West Australians where they are obtaining their wholemeal flour in bulk, books, supplies such as rennet tables and more unusual health foods.

The EG movement appears centralised in the south-west of WA, and we would like to hear of any EG readers within 80 miles of Geraldton.

Keep up the good work, Sally & Jeff Greenham, Geraldton, WA.

Access is open for listings of this sort from any part of Australia. You send them — We'll print them — K. & I.

Dear Keith and Irene,

We love your books and our heads are full of wonderful ideas we hope to try within the near future. We have 25 acres and are in the throes of having a house moved to the block. It is an old farmhouse with happiness ringing through it and we are very excited at the prospect of self-supporting living.

John has had good success with growing native trees from seed. Many happy days have been spent driving around the countryside and then, "all out", as the family scramble through the bushes looking for seeds. Jane, Susie and Paul all have their own collected seeds and have tended them with care and are excited when they are big enough to plant on the block.

Keep the ideas flowing, yours in fun and sun, John and Cathy Hattersley, Horsham, Victoria.

Dear Keith & Irene,

Has anyone made a pottery wheel from a treadle sewing machine? Rex is working on the idea, but it would be nice to see someone else's ideas on the subject.

He has made a solar dryer for bananas and herbs which works quickly and well. It consists simply of a shallow box with aluminium in the base and a sheet of glass over the top with space at each side to allow moisture to escape. It is the easiest way of drying bananas we have found so far.

We have sold our goats, so our fruit trees are flourishing . . . and we have far more milk from our cow than we ever had from goats. She has a nicer personality too. We had goats for 12 years, but I wish we had had a cow long ago.

Brian Walker in *EG16* says there is no justification for cats in the bush. We live in the bush and whenever we have been without a cat, we get overrun with rats and mice. She occasionally catches a bird or lizard, but only about two a year at the most, whereas every day almost she gets a rat or mouse.

Best wishes, Rex and Myra Robinson, PO Box 319, Proserpine, Qld, 4800.

Dear Irene and Keith,

Are there any contacts in our area for buying black sheep or lambs? We have a truck to transport them and are willing to travel a few hundred kilometres. Our ultimate aim is to shear them, spin the wool and then make floor coverings for the log cabin home we are building.

Love, Bob and Claire Nisbet, "Robaire", Currumbin Valley, Qld, 4223.

Dear Irene and Keith,

I enjoy *Earth Garden* and feel great kinship towards its ideals. I'm puzzled, though, because our family doesn't seem to fit into the general feedback that comes through land lines and the articles. The writers seem to be young with very small children, young and childless, or older and childless.

We are in our 30s, with three girls aged 14, 13 and 11. Where are the earth people with teenage adolescent children? I would love to hear from them, their opinions, problems, advantages etc. Are they out there, or does the ideal falter a little when the children start to question the way of life and want to experience the outside world?

Maybe there are others like us, at the point in life where they can contemplate the move, but wonder about the effects on their young adults? I'd love to hear from those kids too who've experienced a self-sufficient upbringing and their reaction to the other ways of life as they hit adolescence.

Thank you for the encouragement of Earth Garden, Rosemary Porritt, 16 Kerferd Street, East Malvern, Victoria, 3145.

Dear Keith and Irene,

After reading *EG14* I was concerned to see Mariorie Spear is using *napthalene* to keep seeds free of little beasts. This product shouldn't be used either — it has chemicals in it, which, like lead, can't be got out of the human body. It is quite poisonous according to my husband, who, with a science degree, should know!

Yours, Jo Holland, Taree, NSW.

Dear Irene & Keith,

We have been on our five acres at Galston for three months now and enjoy it very much. The only trouble is we both work full time and with three children there is not much time to do the things we really want to do. I would be very pleased to contact anyone interested in self-sufficiency in Galston as I'm sure much money could be saved in co-operative ventures.

Regards, Tina Zalakos, "Elysian Fields", 34 Knights Rd, Galston, NSW, 2159.

Dear Earth Garden,

Referring to the letter from Doreen Lyon on page 51 of *EG18* — kids may be registered with *The Goat Breeders' Society of Australia* up to 12 months old. An extra fee is charged for each calendar month after three months.

The breeder of the kids is the owner of the dams and he or she must be a member of the GBS. Anyone buying a registered doe and wishing to register the progeny, should ensure that the person selling is a financial member and that a Transfer Certificate is sent to the Society (a duplicate being given to the buyer).

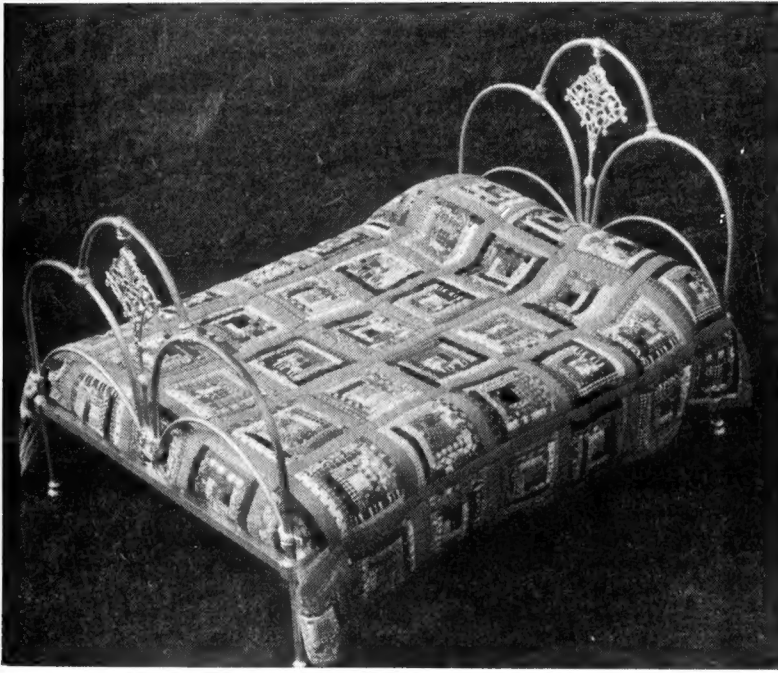
If the does are in kid, this should be stated on the Transfer, with full particulars of the sire. If the does are mated after being transferred to a new owner, this person should get a Service Certificate from the owner of the buck. There are special forms for all these processes, all obtainable from the Society. It may all sound a lot of fuss, but it is done to protect the owners and the goats.

I would like to urge people who have registered stock, especially if it is good, to keep the registrations going. We have had so many wonderful does, excellent milkers, whose buck kids were not eligible for registration, because sometime, somebody did not bother with registering. Thus good goats are lost to us and we cannot afford to lose good goats. Because of quarantine regulations and the huge expense, it is not possible to import goats, so we must try to keep the good ones we have.

A good doe is one which gives one gallon of milk at 3.5 per cent butter fat or better, preferably an average of this over 10 months. That is, she produces more at her peak, to allow for dropping off towards the end of the lactation.

There are many useful goats, of course, which do no better than half a gallon average. A lot depends on the owners' requirements and what they feed.

Yours, Iris Dawson, Pearce, Victoria.



'Making a quid'

By WYLVA TEESE



After about six months of rural existence we knew we were coming to a financial crunch.

Our little savings were fast draining away and it seemed there was no work to be had locally.

Reluctantly, Anton joined the long, spiritless queue of rural unemployed at the dole office. We didn't like it. We felt our privacy invaded by the bureaucratic patronism of the questionnaires and our sense of independence balked at the whole thing.

There just had to be some way to survive.

One year later we've found and tried many things and — though we had to resort to the dole when work dried up — we're on our feet now.

We had been very careful to make sure that we owed nothing on our land or car or anything else before we took the plunge and moved from the city, but living in the country unfortunately *does* take some bread.

For instance, we bucketed water to and fro in our hastily established vegie garden until the logic of installing a hose and sprinkler and taps became very clear and money was spent. Also, although Anton did every second car service himself, we felt for the better survival of the vehicle we should get the occasional professional service.

Though we mostly cook on a wood stove, in summer and for quick cuppas we use a little gas stove — hence we need to buy a gas bottle from time to time.

Then there's our penchant for table wines. Even though we buy in bulk and bottle the wine ourselves, it still hits the pocket. We're renting a little house near our land while we build our mudbrick house. It's cheap at \$15 a week, but there always seems to be the need for more fencing wire, tools, etc — the list goes on and on.

At one point it looked depressingly like one of us would have to go back to Melbourne to earn a few hundred dollars or so (if we could get a job, that is). We began to get a few ideas, born of desperation, that *did* earn us some money, some *didn't* and others which opened up avenues which might be interesting to people beginning to feel a bit cornered like we were.

BLACKBERRY PICKING

This one really worked: picking blackberries for sale. It's amazing how many people think of blackberry picking areas as snake-infested obstacle courses!

We advertised the berries in our local paper at 40c a lb and were overwhelmed at the response.

In the end we worked out this system: we got up at dawn, had brekky and took off with a picnic lunch and thermos of tea. We picked up and down beautiful isolated creeks and valleys (tipped off by locals who remembered picking there years ago), stopping for a swim or a rest. We delivered the berries in cardboard cartons in town, about 15 miles away, by 4.30-5 pm that same day.



It was a long, hard-working day. We did about three days each week, earning an average of \$60 a week. Not a fortune, I know, but we didn't mind. We've learned to adjust to the fact that there's no quick money to be made at country-type jobs, but that there are compensations, which are all part of the new lifestyle we've adopted.

100-DAY EGGS

The next little venture was something we'd thought about as a home industry before we left the city, and we hesitantly decided to give it a go.

We like Chinese food and had been experimenting with "100-year old eggs" (also called 100 day, or ancient eggs) while in Melbourne. These were not really to our own taste and rather pricy at up to 30 cents each depending on the season.

A Chinese mate explained how hard they were to get, the seasonal fluctuations with the eggs and so on.

Well, we bought our first ducks, nine Khaki Campbells (good egg layers). The first thing that knocked us out was how beautiful they were; secondly, how diligently they foraged for food and, thirdly, how regularly they laid.

After discussions with our Chinese friend and his Mum, who supplied the recipe, we began to store the eggs in a brine solution, strong enough to allow them to float, for a period of 45-50 days. We tried to work out all the costs in a businesslike way so we'd know if it was a success financially.

In no time we had 30 dozen and hustled off to Melbourne to meet with our "Chinese connection". We were astounded when the eggs were snapped up at 20c each! — and reeled off home clutching our cheque for \$72.

Now, one year later, we've increased the ducks to 40, but the price we get for "ancient" eggs has varied from 12c to 20c, depending on the egg glut. We're still not sure if we've made money at it as, for the last three months, we've raised 31 ducklings (a story in itself).

They've been eating like monsters and have only just begun to lay, plus there has been the cost of building duck houses. But I've got a good feeling that from here on in we'll begin to catch up with our outlay.

PATCHWORK

As we regularly frequent Op Shops for clothes, it finally clicked with me that here was an awful lot of cheap raw material. Taking that thought a little further and adding in my excess nervous energy, it wasn't long before I was putting together my first patchwork quilt.

That sounds rather simplistic, I know — really it took quite a bit of organising, cutting cardboard boxes

After the tussock cutting.
Anton with fresh grave.

*There is no ancient gentlemen but gardeners,
ditchers and grave-makers: they hold up Adam's
profession.*

*CLOWN, in William Shakespeare's Hamlet, Act V,
Scene 1.*

into hexagons and cutting up the dresses from the Op Shop. The ladies there let me take them at 10c each, if I took an awful lot.

It took months to finish the first quilt, but it looked beautiful and I sold it for \$150. That was about a year ago too. Now, with the help from my ex-seamstress Mum, we make four different types of quilts, some on a treadle machine and some by hand.

It seems just second nature to pick up the sewing whenever I sit down or have some time to fill. It particularly suits me as I'm a definite nervous fiddler and at last I've found a way to channel that energy constructively. We sell the quilts through craft shops and sometimes by advertising in magazines. So far we've sold nine.

HONEY

The next home industry is honey. We sell everything we get, but in two seasons we've not produced enough honey from our eight hives to supply even our neighbours, let alone ourselves.

PHOTOGRAPHY

Anton's job in Melbourne was photography, and he vowed and declared that he'd never do it again when he left town and even sold all his gear. Anyhow, comes the lean times and what should we see advertised but a job photographing greyhounds two nights a week?

He got the job and it was as boring as we knew it would be, though it revealed a whole world of dogs and racing we never knew existed. He gave it up eight months later. One tip: if you have dogs, like we do, and like to feed them well, contact a greyhound owner. They can get meat cheaply — we get ours for 20c a lb.

GRAVE DIGGING

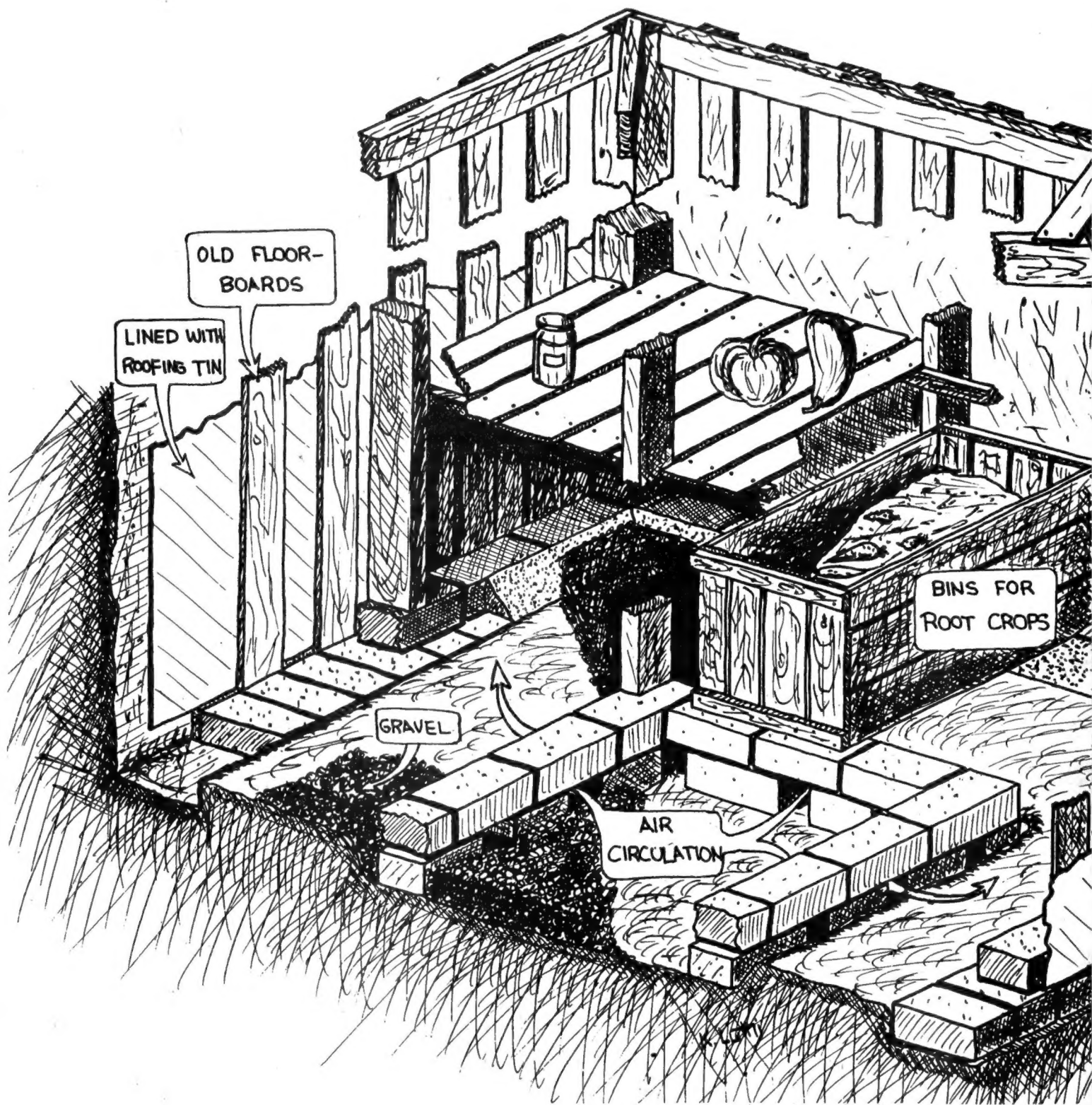
We also advertised ourselves by word of mouth and in the local rag as "young couple, will do anything". And we did — hay carting, relief milking, ti-tree cutting, cleaning, carpentry, tussock-clearing, etc.

These jobs have been hard, interesting and not very well paid in fact, as farmers are having a bit of a hard time lately. We found we could often exchange our work for services that we couldn't afford, such as tractor work and welding. These jobs have been invaluable in meeting the locals, and they've taught us a hell of a lot too.

Now we've settled into just a few things: the quilts, the duck eggs and, best of all, Anton has become the local grave-digger. Strangely enough the vacancy wasn't rushed when it was advertised. Don't think many people fancy digging deep holes. I think Anton has found his true calling in this job — a minimum of work (we live in a healthy, long-lived area) in pleasant surroundings; physical work which leaves him exhausted but not hassled; and it's not badly paid.

Importantly, it leaves us a great deal of time to get things going on the long road to near self-sufficiency on our own farm.

This may sound as though we live in a mad whirl of work, but really it's all been only part-time. We've managed to put in an orchard, fence off the vegie garden and do our access road (see *Earth Garden 18*). We've never had such a varied, physically active and happy time.



BUILD A STORAGE

By STEVEN GUTH & KURT LÜTHI

By last summer our half acre of garden was producing more than we could eat at one time. What were we to do with our bag of spuds? We were reluctant to give them to our neighbours (anyone who has tasted the poetry of organic spuds will know why). How could we store them?

In Europe everyone puts their surplus potatoes in their cellar — why shouldn't we? A cellar seemed like a good idea in other ways too. We could store our other root crops in it . . . and surely our preserves would keep better. A cellar would provide us with an ideal even temperature for beer brewing and wine storage.

Information on cellars is hard to locate in Australia. Everyone seems content to use their refrigerator and to conveniently ignore the ecological inefficiency of it.

We located some cellar-making directions in American publications. But their cellars are made from lots of cheap wood and designed to prevent sub-zero winter temperatures bursting preservative bottles — hardly a problem where we live.

We looked around and found a half-cellar under the oldest shop in town. Built in pre-electricity days it, like most old Australian cellars, is just a hole in the ground situated under the floorboards. It is reached by a ladder and trapdoor.

We felt the half-cellar was not good enough a structure to enable us to organise adequate temperature and humidity control. We decided to make a European-style full cellar, but planned to site it out of the summer sun by putting it under the floorboards of the house. The obvious place for the cellar was under what has since become our enlarged and fly-screened verandah.

The first stage in making a cellar is, alas, digging a hole. We dug a bit every day using a heavy crowbar and a short shovel. Fortunately we unearthed no large rocks.

But we did encounter some queries from our neighbours —

"Burying an elephant are you?"

or much more commonly —

"Expecting a nuclear attack — here?"

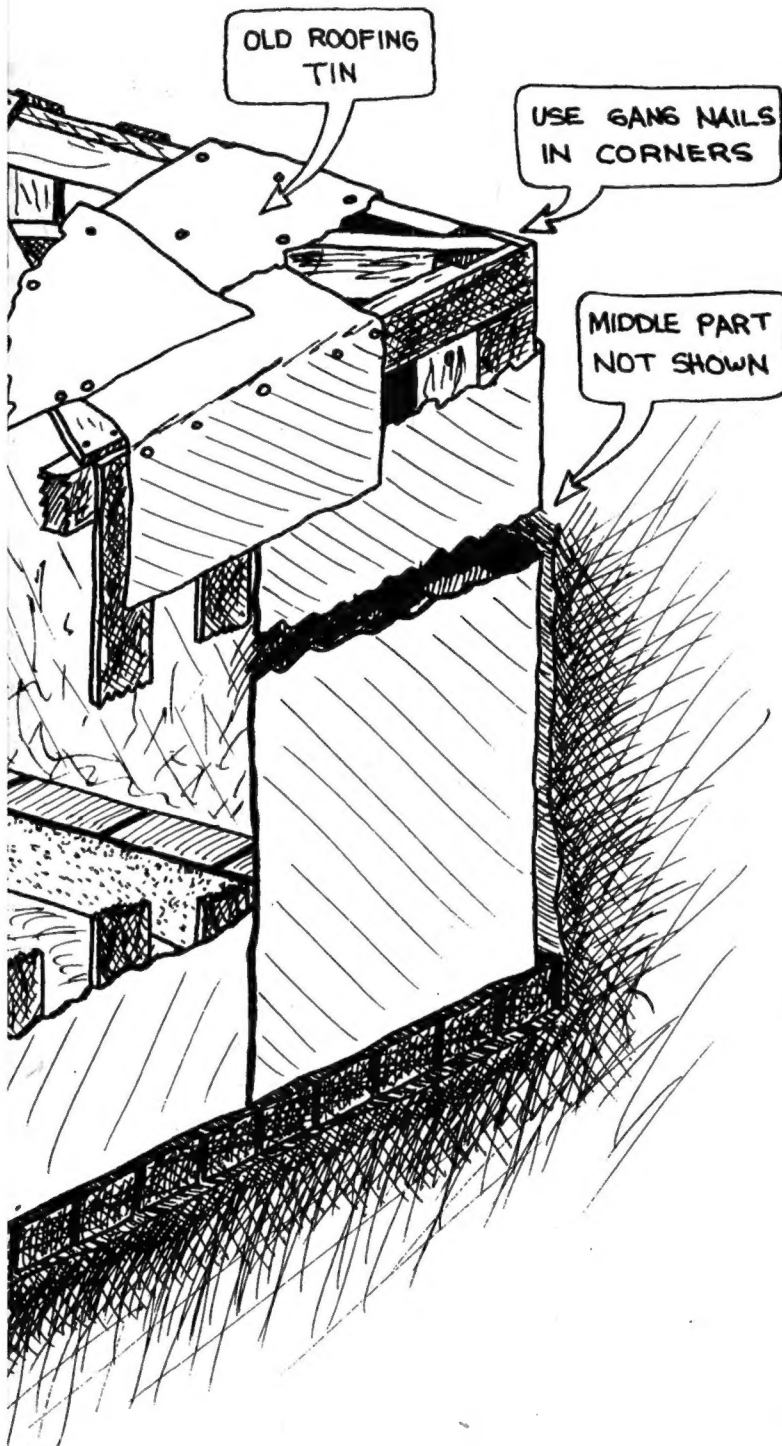
While we were digging the hole we reinforced our house foundation piers and kept the hole a minimum of 1½ metres away from the piers. Our soil is very solid and a cave-in seems unlikely, but we wanted to make absolutely sure that no future earthquake could cause a collapse.

We dug down until we had about two-thirds of the finished height of the cellar underground. This created enough backfill to more than adequately cover the sides and top of the finished cellar.

It seems to make sense to have a cellar which is high enough to stand in. We aimed for about 2½ metres. As we dug, our hole kept collecting three-to-five centimetres of water on the bottom. We were worried about this, but it proved to be run-off rather than seepage. Shortly after completion our cellar remained dry even after heavy autumn rains.

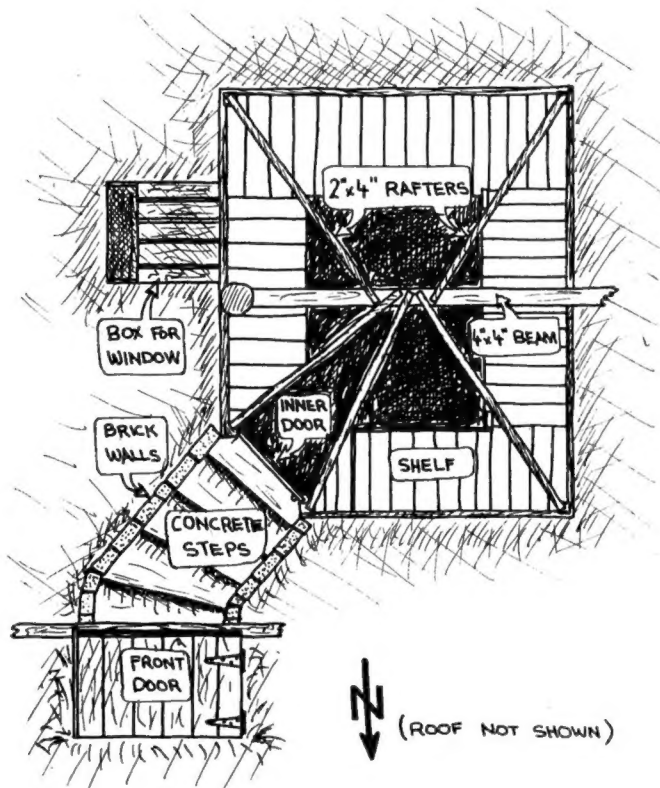
A full description of how we built our cellar is probably unnecessary for *Earth Gardeners*. If you build a cellar, the materials that you get will probably determine how it is built. We had a lot of scrap roofing tin and only a little wood and that is why we built our cellar the way we did.

Even so, there are some things we did or learnt about while building that may help you if you build a



CELLAR

TOP VIEW OF CELLAR



cellar:

1. Traditionally the bottoms of storage cellars have a dirt floor. But it seems to be a good idea to cover the floor with 10 to 15cm of gravel.

2. Walls may not be essential in all types of soil. But we felt that they were necessary to prevent a possible earth slide and to support the cellar roof. Building the walls is a bit like building a shed from the inside out. We found gang nails particularly useful. Although expensive, they tended not to split our old, dry and brittle recycled wood.

3. A cellar is obviously a feasting place for white ants, so we used cypress or other termite-resistant wood wherever we could.

4. We feel that a cellar window should be large rather than small. Ventilation is essential in a cellar and a small window may well be inadequate during wet weather. The best position for a cellar window is on the cool southern side of the structure.

5. Our stairs are poured concrete and the sides of our stairwell are brick. Other building materials could also be used, but whatever is used must have a strong enough frame to support a heavy swinging door.

6. We decided to incorporate two doors because our cellar entrance faces north and we were concerned

that the stairwell could heat up in summer and so warm the whole cellar by air convection.

Our outside door is made from 3cm thick rough-sawn face-cut pine planks, nailed diagonally, with a layer of sisalcraft between plankings.

7. Our main roof support utilises our verandah foundations. Obviously, there are other ways of supporting the roof. A narrow, corridor-shaped cellar would probably have been easier to build and roof. But we preferred our three by two metre cellar because the proportions just felt right.

8. We covered the roof and the sides of our cellar with dirt. There is about 40cm of earth on the roof and about 70cm covering at the top of the cellar walls. Over all this we placed black plastic to prevent possible water soakage. We covered the black plastic with a few centimetres of dirt to prevent it blowing away.

SHELVES

Inside our storage cellar we built shelves made from scrap cypress floorboards, leaving a centimetre gap between planks. On these we store our apples, gourds and pumpkins. We also use the shelves for our bottles and preservative jars. Undoubtedly the shelf arrangement you organise will depend on the things you have to store. We arranged ours so that the top shelf can be used for summer siestas.

We store our root crops in wooden boxes filled with coarse damp river sand. This tricks them into believing that they are buried deep in the ground and keeps them alive and healthy for quite a long time. Cellar-stored carrots stay crisp and vital for months unlike their fridge-stored cousins, who soon go soft and yucky!

From our reading and experience it seems that mould is the biggest potential problem in a cellar. To prevent this adequate ventilation appears to be essential. In humid areas, or places where the soil is damp, it may be a good idea to incorporate adequate cross-ventilation into the structure.

In a temperate region a properly-designed cellar should have an approximate day-night temperature variation of only about 2°C, with a summer average of about 20°C, and winter average of about 15°C.

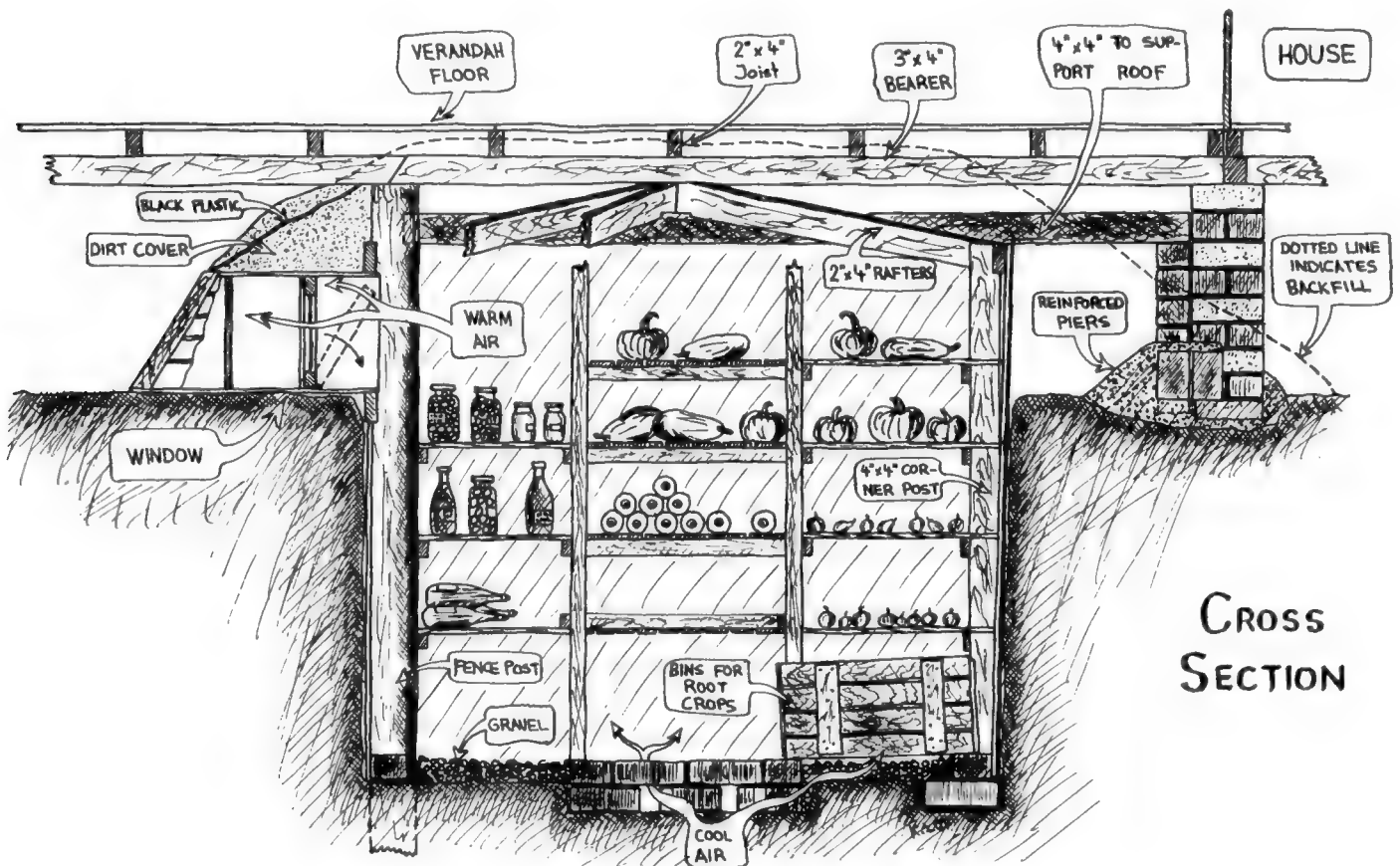
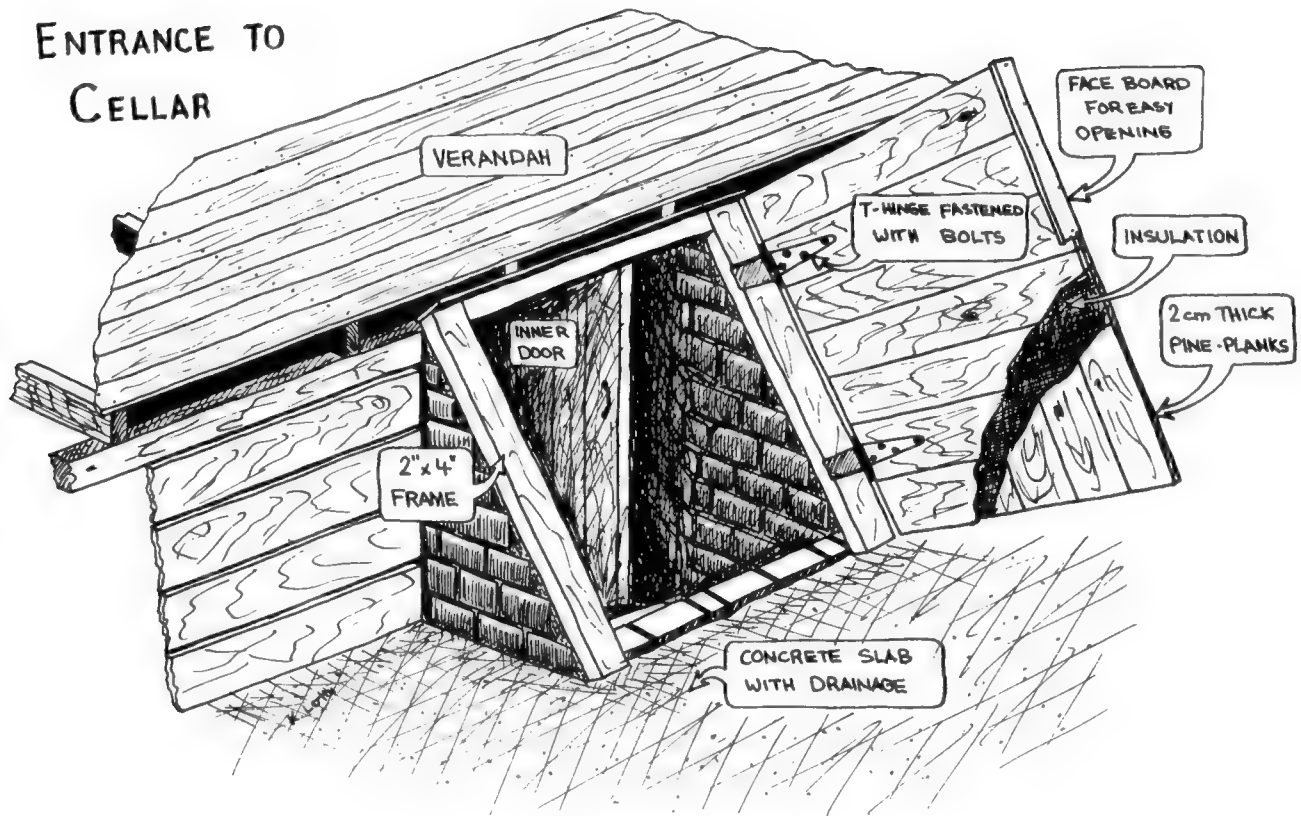
Cellars are not as cold as refrigerators, but they are larger and ecologically non-destructive in every way. In a vegetarian household a cellar makes a fridge unnecessary.

Before you start digging a hole for your cellar, carefully consider its size, shape and location. A good cellar is visited many times a day and should be conveniently situated and easy to get in and out of. Perhaps the easiest cellar to build and the one most usable is a corridor cellar with a window at one end and a door at the other. Room-shaped cellars are probably more pleasant to sit in.

Why not build an exactly proportioned and orientated pyramid-shaped cellar? A pyramid cellar might combine the advantages of pyramids (dehydration rather than decay, sweetening and vitalisation) with a cellar's ability to maintain an even temperature and dormant atmosphere.

If you decide to build a cellar we hope that, like us, you will meet no large rocks as you dig into our planet's delightfully cool underworld.

ENTRANCE TO CELLAR





Abbie, Biddy and Neil in the Pumpkin House, a sapling-frame structure in which they lived Swiss Family Robinson-style while building their mud brick house. *Photo: Sue Ford*

The Book of Earthly Delights

Living in the bush with Neil Douglas and Abbie Heathcote

The Book of Earthly Delights, Living in the bush with Neil Douglas and Abbie Heathcote, Compendium Pty Ltd, 1976, 152pp, including 8 full colour. Recommended price \$8.50 paperback, \$15.50 cloth.

Reading *The Book of Earthly Delights* is like visiting old friends you haven't seen for a while who have a lot to tell you. Abbie and Neil through stories and yarns, drawings, photos and paintings, tell about their unique way of life, living close to the earth and being a part of it.

Their wry sense of humour intrudes into instructions on protecting your house from bushfire, making friends with bush animals (especially the choughs), how to make quill pens, cheese, bulrush baskets and "pezley zoop". We liked hearing again some of the old stories told over a "cuppa" around the pot-belly heater at night.

Some outstanding tales are those about the "pumpkin house" (painted by John Perceval), the garden bushouse where Neil, Bidy and Abbie lived while they made a garden and built their mudbrick house at Kangaroo Ground, Victoria, also reminiscences about the German farmers at Bayswater. There's a plea for the native grass tussock (*Poa australia*) and for a better go for snakes.

A chart of the division of sex roles shows that

Abbie is the building designer and foreman, does the tax, drives, sews and mends, cooks, keeps the goats and chooks (with advice from Fabian) and shops. Neil is chief of gardening, conservation, cleaning and dusting, decor, tea making, fire clearing, drain maintenance, education and public relations. Abbie also spins, weaves and knits. Both write and are well known artists.

When Neil is in full flight in just one of these activities, say conservation, he goes at it tooth-and-nail, fighting for a bit of bush through the newspapers, television, ringing people up, donating paintings, whipping up interest. He might spend months on painting at a time, or months on gardening or conservation to the exclusion of the others.

Abbie is an all-rounder, skilled at crafts and just as determined as Neil. Look at how she has worked to get this book into print and to ensure that they both have the freedom to follow their artistic and practical pursuits.

This book is very well designed and put together, with vivid colour plates and crisp black and white shots which are packed with detail. It is a tribute also to the Australian publishers, Greg Ket and Penny Lane of Compendium Pty Ltd who combine their own back-to-the-earth life with that of publishing.

Extracts from *The Book of Earthly Delights* on these pages are reproduced with permission of the authors and publishers.

GARDENING

Some gardeners love digging



ABBIE

'Once,' said Neil, 'I knew a man who believed in the English tradition of digging. He used to take out one spadeful of earth and place it at the other end of the row. He would then carefully turn each spadeful of earth into the hole next to it, and when he came to the end, there was the first spadeful of soil waiting to be placed in the last hole.

'What a waste of precious time!' said Neil. 'And to prove it, I'll grow a marrow on that brick path!'

He went and collected all the trash he could find: peelings, tea leaves, baby's potties and so on—then he planted the seeds in the heap of trash. And of course there grew a most beautiful marrow plant, which kept the family in zucchinis for months.

'The man who loved digging said he never liked marrows much anyway, and went on digging!' said Neil.



ABBIE

Spinning and weaving

How long does it take to spin and weave a yard of cloth? I have no idea, but this is how it gets done. When people call in, which is most of the time, we sit around and talk and drink cups of tea or listen to music. I sit and spin the while.

Eventually after weeks or months, depending on how many visitors we have, there is enough wool to do some knitting or weaving. The knitting takes place in the same way as the spinning or when I'm reading a good book. Time taken is immaterial because otherwise I would be doing nothing.

Then I might decide to dye some wool with gum leaves. Neil goes out and cuts down a sapling or two (they regenerate again from the roots, and in the process give us a ground-level view of a cluster of the incomparable red box leaves).

I strip all the leaves off and boil them up in a big pot for hours, filling the house with the lovely aroma of eucalyptus. Neil tells all the visitors we are very poor and all we have to feed them on is gum leaf soup! While the leaves and wool are simmering I do some other task.

Some of the warping preparation requires concentration, but most can be done in company like the spinning. Visitors sometimes help. The actual weaving is pleasant, creative and very quick, so that doesn't count.

Why worry about saving time? Worry about enjoying how you spend your time instead.

Is handspinning practical? Consider the wool which goes through the factory. It is first dipped in strong solvent to get rid of the burrs and rubbish. Then it is torn to shreds by the carding machines. Every skerrick of natural oil is taken out with detergent, then it is bleached, which further damages the fibres, and dyed with chemical dyes.

By the time the wool comes to you its life span is about two years. A homespun jumper may cost five times as much in terms of dollars per hour, but it will last a lifetime. No fossil fuels or detergent or other pollutants are used, and clothes which last longer mean less rubbish on the earth.



Abbie spinning wool. Photo: Pat Stewart.

Grow your own firewood



NEIL

When we moved to Bayswater there were about eight cootamundras of varying sizes on the property. They grew to a huge size very quickly in the deep clay.

When they began to fall apart I cut them down for firewood and planted more, continuing to do this until there were about forty trees around the cow paddock. They were very good firewood, slow burning and hot.

Approximately four big trees were cut down each year, providing fuel for the wood stove which was going most of the time, and an open fire at weekends when we had visitors. This was for a family of five. Had I been a goat keeper at the time, they would also have provided tons of the best goat fodder.

Now that I have ten acres of regrowth on my block, I try to pick the trees that will naturally die out as the bush matures. Most are red box, which is one of the best firewoods. I always leave plenty of dead trees and logs for the wildlife to shelter in.

Don't forget that if you get your own firewood, it will warm you twice!



WOOD

Wood is a renewable source of energy.

It is a clean, safe fuel which will still be available when the familiar fossil fuels have finally been exploited — provided, of course, that our resources of timber are properly managed and conserved.

When wood is burned the stored solar energy is released as heat. It is estimated that wood “locks in” about five per cent of the sunlight falling on a forest.

If there is bush or other trees on your land, or you have access to a woodlot, then you have at your doorstep the cheapest fuel for heating and cooking. There are other sources of timber, such as recycled container pallets, boxes and crates from factories and left-over wood from sawmills.

An obvious drawback is smoke pollution caused by unburnt gases going out your chimney. This can be reduced by more efficient burning in a wood heater or stove like those described in the following pages.

Wood burns more cleanly than oil or coal. An advantage is that solid fuel cooking stoves and heaters will work on either wood or coal. Coal is likely to be the longest surviving of the fossil fuels — though naturally its price will rocket as the cost of extraction mounts.

It is true that many fires are caused by stovepipes catching alight. This can be prevented by using only dried and seasoned wood and by regular cleaning of flues and pipes. Wood stoves and furnaces are rarely known to explode.

When green, newly-cut wood is used, there is a build-up of creasote which coats the inside of the stovepipe or chimney and can be set alight from a spark. Burning green wood is inefficient for a start. It is about 50 per cent water, so most of the heat energy is spent evaporating the water and sending water vapour up the flue.

When wood is “seasoned”, dried under shelter for six months or more, it will rate at about 12 per cent moisture. Hardwoods contain less moisture, but little research has been done on just which Australian woods are the best to burn.

For centuries the open fireplace was the centre of the home, a place for the family, cats and dogs to gather together, especially in the long winters of the northern hemisphere. “Hearth” was synonymous with “home” and songs like “Keep the Home Fires Burning” had a sentimental effect on loved ones far away.

Today, the open fireplace is rather a luxury than a necessity. Worse still, it is often a “feature” or ornament to a modern house. Nostalgia is rather tempered by the fact that the old style fireplace makes use of only eight to 15 per cent of available heat.

Many fireplaces are so narrow and deep that the heat from coals and flames cannot be radiated into the room. In comparison pot-belly stoves get about 20 to 25 per cent efficiency and “airtight”, or draught-control heaters, rate about 40 per cent efficiency.

HEAT

Efficiency increases as the combustion process becomes more controlled. Wood gases are burned in stoves in which the chamber is airtight. Wood heaters warm by convection and radiation to the air around them and in the room. Wood furnaces often have ducting systems to carry hot air to other parts of the house.

If you are planning for the future, it has been estimated that about eight acres of timber is enough to keep a family permanently supplied with fuel for cooking and heating. This is done by culling out dead timber and replanting whenever a tree is removed.

You should be able to look ahead a few years after a while, ringbarking trees for use next season, or the season after that. To age the wood, stack it in loose piles, raised from the ground, preferably in a good-sized woodshed, not far from the stove or fireplace. Spring is a good time to collect wood. It can then dry all summer.

Chop, split or saw to size for next winter if you like. Sort green and dry logs in to separate stacks and chop up kindling wood. Use a chain-saw if you must to speed up the work. An idea is to share a chain-saw with a group of friends or neighbours.

Collecting your own firewood will make you aware of energy and what it's all about. All the more reason for planting trees too.

Stay warm!



An American kitchen, from *The Kitchen Companion*, Philadelphia, 1844.

Sometime during the vast gulf of pre-history man's ancestors discovered the use of fire. Until that time, some 400,000 years ago, and probably long after, they ate their food raw.

Wood heat gave early man warmth and light for his cave, it cooked and preserved his food and was used for hardening his weapons.

The use of pottery, about 6000 BC, gave people the chance to bake bread in clay ovens and boil water in pottery vessels. This was the same period of transition from hunters to farmers.

There were few changes for thousands of years after that. It is safe to say that most household cooking was done over an open fire or in a brick oven until the 18th century.

By the fifth century BC, bronze cooking vessels were in use, there was pit cooking; and pigs and birds were baked in wet clay in the fire ashes.

The Romans used brick ovens for baking bread and developed the first form of "central heating", the *hypocaust*, in which hot air circulated from a cellar fire under the household floors. At Pompeii cooking was done on a raised hearth over charcoal fires and metal tripods were in use. Both fire and implements were preserved by the eruption of Mt Vesuvius in 79 AD.

About the same time the Roman nobility was slowly being poisoned by using pots and other cooking vessels made of lead. Their water pipes were also made of lead.

A cast iron stove from China, dated to about 200 AD and shaped like a horseshoe, is in the Chicago Museum of Natural History. It was cast in sand and has five cooking holes and four feet, shaped like elephant's feet!

Traditionally, heating and cooking stoves have been made from cast iron, wrought iron, steel, clay, bricks (sometimes with tile or porcelain exterior) and soapstone (good for boats, as it does not rust).

Writing about 800 AD, Charlemagne's secretary, the Abbot Eginhard, described the Emperor's daily meal, served in four courses "exclusive of the roast, which the hunters used to bring in on spits, and which he ate with more pleasure than any other food."

Just such a style of cooking in the royal household was still in vogue some 250 years later. Men roasting meat on a spit and carrying it on skewers are shown in the famous 11th century Bayeux Tapestry. Other retainers are cooking food in a cauldron over a fire.

In the nobleman's house of the Middle Ages a roaring fire of logs stood on a raised hearth in the centre of the hall supported by *andirons* (metal "log-dogs"). The lord's servants were often known as "hearthmen".

Smaller pots and cauldrons boiled in the cottages of the poor, usually supported over the flames on *trivets* — metal tripods with flat tops. Fish were cooked in pans and a stockpot simmered with the inevitable:

*Pease pudding hot, pease pudding cold,
Pease pudding in the pot, nine days old.*

Here the fire was also in the centre of the house and there was *no* chimney, so the cottager's home, like that of the Nonne Preestes' of Geoffrey Chaucer, was usually "ful sooty". Houses were often destroyed by fire, or children scalded by boiling water from overturned cauldrons. This primitive type of wood heat certainly had its disadvantages.

Larger towns had public cookshops where people could take food. Bakers also prepared pies and other food to order in their stone or brick egg-shaped ovens.

The peasants made bread in a covered pan around which coals and ashes were raked in the fashion of the much more recent "Dutch" oven.

Supplies of timber became very scarce in Britain in the time of Elizabeth I, mainly because of the demands of boat building. "Coles" (really coke) was the principal heating fuel for those who could afford it, being burned in fire baskets and braziers. The rest used "sea coles" (pit coal delivered by collier) which had become the staple fuel by the reign of William and Mary, starting in 1689.

In Switzerland, Germany and Austria a beautifully decorated tiled wood stove developed called the *Kachelofen*. These stoves were the core of the household and were often decorated with painted Biblical scenes on the glazed tiles.

Occasionally they incorporated sleeping shelves for kitchen staff, racks for clothes and herb drying and even spaces for raising chicks. Some fine examples are to be seen in the Zurich Landesmuseum in Switzerland.

Cast iron stoves were in use in Alsace in 1475 and in Germany in 1509, but not in Britain until about 1759, when they were made by the Carron Iron Works in Scotland.

Rounded cast iron stoves, forerunners of pot-belly and the American "parlour" stoves, developed in 15th century Holland and Germany. The Scandinavian (or Dutch) "box" wood burning stoves (like the Jotul) first became popular during the 18th century.

The idea of a barbecue comes from Mexico, where the Spanish first saw fish being smoked-dried on lattices of green wood. They called it *barbacoa*, after the frame on which they cooked large joints of meat.

In the Orient and the Middle East charcoal braziers and open fires were the usual ways of cooking at this time.

The 18th century ushered in an era of improvements and patented apparatus in the wood heat field, adding fireboxes, ash cans and flues to heating and cooking stoves.

That great innovator, Benjamin Franklin, developed the *Pennsylvanian Fireplace* in 1742. Its sliding shutter and sealed joints allowed the control of air draughts, making it doubly efficient compared with an open fireplace.

In 1788, Mr Thomas Robinson took out a patent for a kitchen range with a cast iron oven lined with bricks on one side and a water boiler on the other, which was to attract many imitators.

In pioneer Australia the kitchen fireplace often seemed to be the first solid attempt at building after a rough bark shelter was put up. Made of mud, adobe, stone, logs smeared with clay and later corrugated iron, they often looked elaborate compared with the flimsy huts attached to them. Cooking was done over the open fire, which was usually warm enough to heat the entire dwelling.

It seems that the Australian kitchen and its fireplace or stove has been circling the house for 200 years. Usually, it was in a separate cookhouse across the courtyard, separated by a "breezeway", or on the cool verandah near the washhouse and water tank.

An Anglo-American chemist and physicist, Count Rumford, wrote an essay on *Chimney Fireplaces* in 1800, which led to the elimination of smoky chimneys by the adaptation of a smokesheft and inclined fireback in chimneys. Rumford also built a U-shaped brick stove

with a closed top, so efficient at keeping in the heat that eventually a separate fire grate had to be added to keep the cook warm.

The Georgians added their characteristic touch of elegance with waffle irons and toasters for English afternoon teas and grates designed by Chippendale and the Adams Brothers.

In 1836 Issac Orr took out a patent in Washington on the first "airtight" stove with sealed joints.

A closed top cooking range was developed by an Exeter ironfounder, George Bodley, in 1802. It used an iron flue, though the front of the fire was still open to allow roasting.

Writing in her *Household Management* (1861), the Victorian cooks' bible, Mrs Isabella Beeton assumed that most kitchen ranges used coal. She praised the closed oven "Kitchener" type range, developed in the United States, which was lightweight and portable and could be used in the far-flung colonies.

By 1860 in Britain and the United States the enclosed iron range was in general use. Gas came in the 1880's and the first electric stoves as early as 1890, though these were not accepted as being reliable until the 1920's. By that time, the days of wood heat for the majority of people were numbered.

SOURCES

The English Fireplace, L. A. Shuffrey, B. T. Batsford, London, 1912, 234pp.

Home Fires Burning, The History of Domestic Heating and Cooking, Lawrence Wright, Routledge & Kegan Paul, London, 1964, 219pp.

The Complete Book of Heating with Wood, Larry Gay, Garden Way Publishing, Charlotte, Vermont, 1975, 128pp. Our copy from: Compendium Bookstore, 207 Oxford Street, Darlinghurst, NSW, 2010.



JØTUL

JOTUL STOVES.

Design Centre, 93-95 Grenfell Street, Adelaide, SA 5000.

Warren Kennedy, PO Box 64, Mosman, NSW 2088.

The Norwegian type of "box" wood heating stoves and cast iron space heaters, made by Jotul for those icy Scandinavian winters, are now available in Australia.

These are plain, old-fashioned, rather squat stoves of blackened heavy cast iron. They are sealed so well that they qualify as "airtight" stoves and they are designed to give out an even, long-lasting heat.

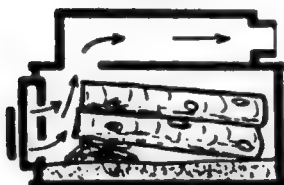
The "box" stoves, nos 118 and 602, work on a front draught principle, so the wood burns evenly from front to back rather like a cigarette or cigar. This is the result of a baffle in the upper part of the firebox which forces the air current into an S-shaped pattern.

Both models are low enough to fit into the opening of a normal fireplace. They use a five-inch flue and have various options for placing the stovepipe. The 118 can be fired up with 16 inch or 24 inch logs and has a traditional winter scene cast in relief on its sides. The flat top doubles as a cooking surface. Price is about \$450.00.

No 602 is similar, but scaled down, especially in length, with a single top hotplate. Price is about \$300.00, but stocks are limited.

The more conventional looking Jotul room heaters have tight fitting, fold down metal doors which allow them to hold fire overnight. They may also be used as open fireplaces with the door open. Two models, no 4 (\$630.00) and no 6 (\$795.00) are on sale.

IGNITION



SPECIFICATIONS

Height:
Width:
Length:
Flue diameter:

Position of flue connection:

Heating capacity:

No. 602

640 mm (2'1")
325 mm (1'0")
490 mm (1'7")
125 mm (5")

No. 118

770 mm (2'6")
360 mm (1'2")
750 mm (2'5")
125 mm (5")

Rear or top.

Left, right or rear.

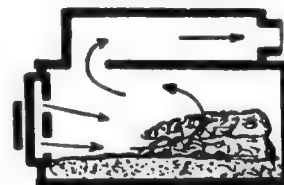
5000 W

7600 W

(17,000 BTU/HR)

(26,000 BTU/HR)

HOURS LATER



Pot~bellies

Mont Eltham Stoves,
136 Sherbourne Road, Montmorency, Victoria 3094.



Pot-belly stoves have made Barry Burrowes of Mont Eltham Stoves many warm friends since we first mentioned his work five years ago in *Earth Garden 1*.

Barry traces the popularity of pot-belly stoves back to the "old countries" of Europe in the early 19th century.

In those days they were used on sailing ships as a safe means of heating. "I can see the sailors playing cards in the cosy warmth of a pot-belly stove on top of which tea was brewing," says Barry.

His craft of iron casting has ensured the present life of some of the most popular Canadian, Portland and Franklin stoves from the past.

Mont Eltham stocks a wide range of pot-belly models, all in cast iron, some with top or rear flue openings, some with or without galleries. He also sells pot-belly furnaces, iron fire grates and a low-legged "Crown Dover" cooking stove.

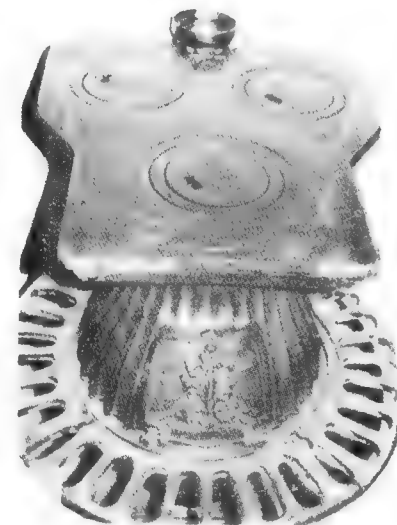
Barry Burrowes says that whatever you choose for a pot-belly stove, it will soon become the cosiest spot in the house. "Old handmade bricks are colourful," he suggests. "They could well be used as a background, or underneath the stove."

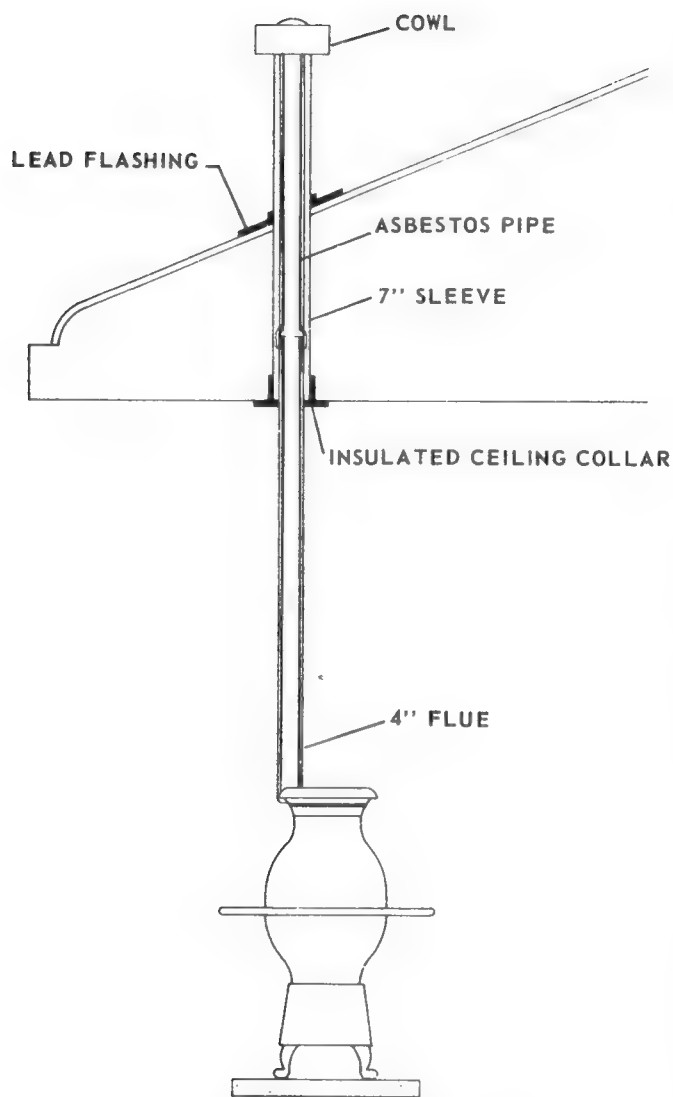
"Other materials are driftwood, railway sleepers, bluestone, rock, mudbricks, slate. Whatever your arrangements are, don't forget: 'No combustible material too close to the stove'." If you want to keep warm, send sae for prices and information to Barry.

The best setting we know for a pot-belly stove is at Abbie Heathcote and Neil Douglas' home at Kangaroo Ground, Victoria, which sits in a sunken circular pit. There you sit drinking tea by the warmth of the stove at night on built-in circular steps covered with handspun rugs.



Barry Burrowes of Mont Eltham Stoves pictured with his largest model pot-belly stove, the Swagman, which stands 4ft high, has a 2ft 4ins square base and weighs 4½cwt. It is capable of heating 20 squares. Cost, about \$420.00.





Installing the Old Colonial pot-belly.



Elder Smith Goldsbrough
Mort Ltd. Country
branches, or 5 Prohasky
Street, Port Melbourne, Vic-
toria, 3207.

Simpson Pope must be taking an each-way bet on the future of energy. As well as their washing machines and other consumer products they make the "Old Colonial" pot-belly heating stove, which is marketed by the Elders pastoral group.

It's a cast iron well-sealed unit, 37 inches high, with rear or top flue, four inches wide, finished in matte black paint. It will burn wood, briquettes, coke or coal or double as an incinerator. Current price is \$289.

Lavec Industries,
115 Smith Street, Fitzroy, Vic 3065.
Highland Road, Seymour, Vic 3660.

Lavec's showrooms in Smith Street, Fitzroy, near the Collingwood Town Hall, are a kind of emporium of wood heaters and ranges which you would expect to have seen around the turn of the century.

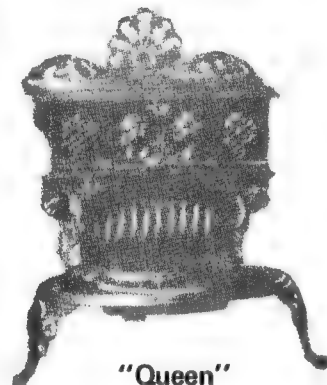
The company is an agent for a very wide selection of wood and solid fuel heaters and cookers and claims to have the best range of spare parts for all makes.

The **Romesse** pot-belly stove, made in Scotland, comes in six sizes, from a height of 32 inches to 50 inches, all with a 16-inch diameter, with or without galleries. These cigar-shaped cast iron furnaces are used mainly for heating factories, workshops and other large areas.

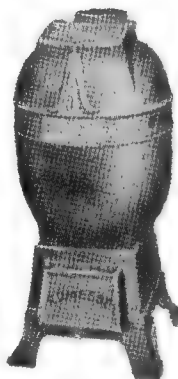
Cooking stoves sold by Lavec include **Metters**, **Bega**, **Canberra**, **Duo-King** and **Beacon Light**. They also stock **Etna** slow combustion room heaters. Send sae for details.



Lavec "Giant"



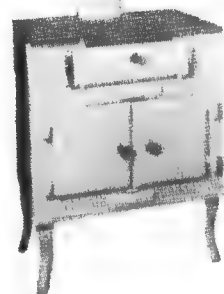
"Queen"



No. 1 "Romesse"

6 Models
Flat cooking top, optional.

Metters



24" Top Fire
Wood Stove

LAVEC CAST IRON STOVES

The Aga Saga

AGA, RAYBURN & WELCOME DOVER.

Allied Ironfounders Pty Ltd,
27 Provost Street, North Melbourne, Vic 3051.
10 Erith Street, Botany, NSW 2019.
1 Cornwall Street, Fairfield, Qld 4103.
AGAburn Distributors, Main North Rd, Pooraka, SA
5095.

The **Aga**, probably the cleanest and most efficient cooking range ever developed, was invented by a blind man, the Swedish physicist and Nobel Prize winner, Dr Gustaf Dalen, in the 1920s.

It incorporated deep, well-insulated lids over cooking plates, thermostat control, water heating and separate ovens for simmering, baking and roasting. Before World War II, Aga stoves were advertised as using only £stg 4.00 worth of fuel in a full year. That's efficiency!

Aga stoves are made in Britain by Glynwed Foundries Ltd, of Ketley, Salop. Only a few are sold in Australia, probably because of the huge price (nearly \$3000), though older models are still in use here and there. Get one if you can.

Rayburn slow combustion cooking stoves would seem to be the next best bet in quality and workmanship. Also made by Glynwed, they will burn wood, briquettes, coke or coal.

Rayburn stoves are finished in white in a design which won't look out of place in any modern kitchen. They also provide insulated hotplate covers and a 40-gallon hot water storage cylinder which is heated by a back boiler. The "Regent" sells at about \$860.00 and the "Royal" at about \$980.00.

Allied Ironfounders retail the **Welcome Dover** cast iron cooking stove, which has five cooking plates, an oven and cast iron shelf with chromium-plated edges. An option is the 13.5 litre hot water tank. Price, around \$200.00.

GOOD FOOD IN THE AGA

This is the title of a curious book, written by Ambrose Heath and published by Faber and Faber in London in 1933. It was especially designed for Aga users, with tips on maintaining the range and cooking and preserving on it.

It came in a special waterproof and washable cover. You might still be able to find it in some libraries.

Some hints:

Clean out the flue every three months.

Drain off a pint of water from the bottom tap each quarter to prevent sediment forming.

Keep ashpit doors tightly closed.

Keep hotplates down whenever possible.



Rayburn cooker

HOME-MADE BRIQUETTES

Pound up a pailful of clay in an old bath or laundry tub. Add two pails of hot water, six or seven old newspapers torn into small pieces and half a pail of sawdust.

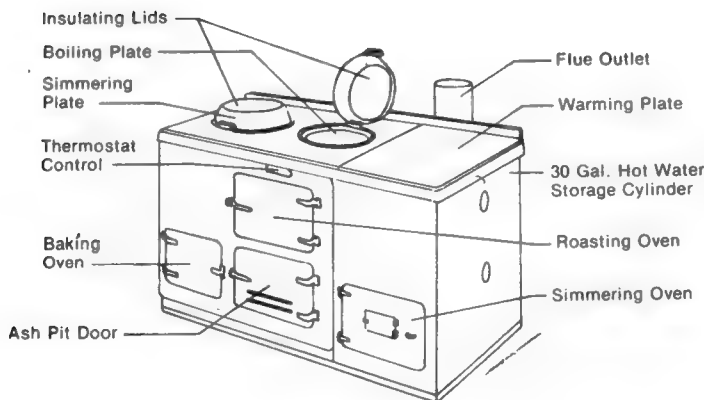
Stir till smooth, then add another pail of hot water and work in enough coal dust to make a stiff mass. Roll this into balls on a board covered with sawdust. Make holes in the ball with a stick and leave to dry slowly.

ANOTHER RECIPE

Get some clay (free of stones and sand). Mix with water and make it plastic. Mix in as much coal as the clay will hold together, treading it in with the feet. This is anything from 5-8 parts of coal to one of clay by mixing a shovel of lime to a barrow load of clay. A brighter fire results from this and the ash is better for the garden.

Mix well and leave the whole lot in a heap covered with old sacks to keep moist as needed for use. Cut off a portion and form into ball shapes by hand.

The small coal should be free of lumps and should be riddled through a 3/16th inch mesh. This mixture can be made in a mortar mill and this is the quickest and best method. The balls can be put on the fire quite wet and will soon dry hard.



Aga Cooker 1929

By WYLVA TEESE

Our first experience with a wood stove was a little negative. Here we were with a sulky looking, rusty old black thing, which felt damp even inside. It was — the chimney had leaked onto it over years of disuse.

However, we shoved in paper and sticks and got a roaring blaze going and smoked ourselves out of the house. This went on until we realised that the chimney would benefit by a good sweeping — bloody rotten job. Essential though and it did help.

But the stove still wasn't responding well. It didn't seem to heat up enough. We cooked on top of it for ages before we realised that the main problem was that it was chock full with years of soot and ashes.

Sneaky things these old cook stoves. It took a helpful neighbour to point out the hidden little trays and removable iron plates tucked away behind oven doors at the bottom and sides. Also the flue — put there especially to remove soot and accumulated ashes. This was almost like concrete and it took hours of work spreadeagled on the floor poking a long hooked wire into the bowels of the stove to get rid of it.

So when your stove seems sluggish and won't really heat up, it's a sure sign that it needs a good clean again.

Magic! It worked. I could imagine the stove heaving a sigh of relief. We started to make bread, buns, roast and stews with it. The whole kitchen was transformed by its warmth.

We still made mistakes of course, like using pine offcuts picked up from the local timber mill. This was wrong because pine leaves a sticky, tarry residue all over your newly-cleaned stove and starts to clog it up again.

The same helpful neighbour advised us that the best stove wood is eucalyptus, any kind of gum tree, but preferably a dead, upright tree, or one down for 10 years or so. A good general rule is that if it chops easily it will burn well.

Chop your wood according to the size of your firebox, perhaps 12 to 15 inch pieces. Store your wood somewhere dry. We're lucky enough to have a seemingly endless supply of dropped branches and dead trees right on our property.

Another interesting fact she pointed out is that any tree felled by lightning will not burn well.

My morning routine in winter is to rustle paper, bark and kindling into the stove to start a quick blaze to do the brekky tea and toast. Then I load up with wood and by lunch time she's hot enough to cook a roast or bake bread.

In a cold snap, we leave the stove going at all times, loading it up at night and damping it down (shutting off virtually all air supply). In the morning she's ready to go and the kitchen is beautifully warm.

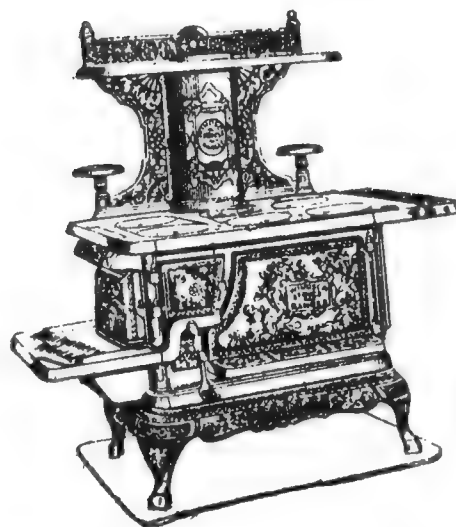
Of course our old crock doesn't work as efficiently as the newer combustion stoves, but it doesn't do too badly. We have a new stove on order complete with hot water service in our projected house.

Two things I would like to suggest if you're getting a wood stove yourself:

Fit in as many racks and bars above it as possible to dry clothes and dishes and whatever. Why waste all that warmth going up the chimney?

Also install nice wide surrounds, good for keeping pots of soup, stews and the kettle warm — terrific for raising bread dough, too.

Old Stoves



Outside Australia there has been a run on wood heaters and wood cooking stoves, mainly as a result of the 1973 "energy crisis".

In Britain and the United States, many reliable old types of stove were turned out once again. There were also some shoddy aluminium, baked enamel, thin sheet metal or even tin ovens hastily made to cash in on this new marketing opportunity.

Old heating and cooking stoves are still to be found in abandoned farmhouses, at dumps, by railway lines or for sale in the local paper. When we lived at Lithgow, New South Wales, an electrician told us that scores of wood stoves being replaced by gas were simply put out with the garbage.

Many older stoves may be too rusted up to use again, or they may have some vital parts missing. A lot of rust can be removed by using a wire brush and kerosene.

This is a general idea on what to look for if you are seeking an older stove, or looking for a new one.

Cast iron is the traditional material for wood stoves and still the best. It transmits heat and doesn't warp easily. It is used for stove bodies, firebox liners and grates and will last for many years.

Sheet steel is next best. It is often combined with cast iron to make a serviceable stove. It will eventually warp and crack, especially if it is welded, but sheet steel can be easily replaced.

Firebrick is often used as a firebox lining, which is a good feature. It does not transmit heat and lasts well. If you will be burning wood, you need a large firebox (11 inch grates) to cut down on wood cutting. The smaller fireboxes were used for coal and coke burning.

Cast aluminium should be avoided. It transmits heat rapidly and will burn you, especially as it is being used on oven door handles!

Porcelain is a good stove finish. **Baked enamel paint** will wear out quickly. **Nickel trim** was never very popular in Australia, but it can be replated. **Chrome** discolours through heat, but may also be renewed.

While at school I remember telling the other kids that we cooked on a wood stove. Somehow they got their wires crossed and I was often asked if our "wooden stove" was all burnt away yet!

It is, in fact, a *Simpson Steel Economic Stove*. Through the school years a few friends came to see this mysterious stove and several became hooked on the home-made biscuits that it cooked, so different than those their working mothers produced.

Our old stove is probably unprocurable now, except for a few neglected units rusting away in farmyards. The fire is at the side and spreads across the top under the three sets of hotplates that are divided into three rings which can be lifted off to obtain more heat. The heat also flows around the other two sides of the oven via a

cavity between a three gallon water fountain, then under the oven.

The fountain boils within a few minutes, always ready for that cup of tea. Of course a large enamel jug is kept close by to refill the fountain, as it would soon be spoilt if it boiled dry.

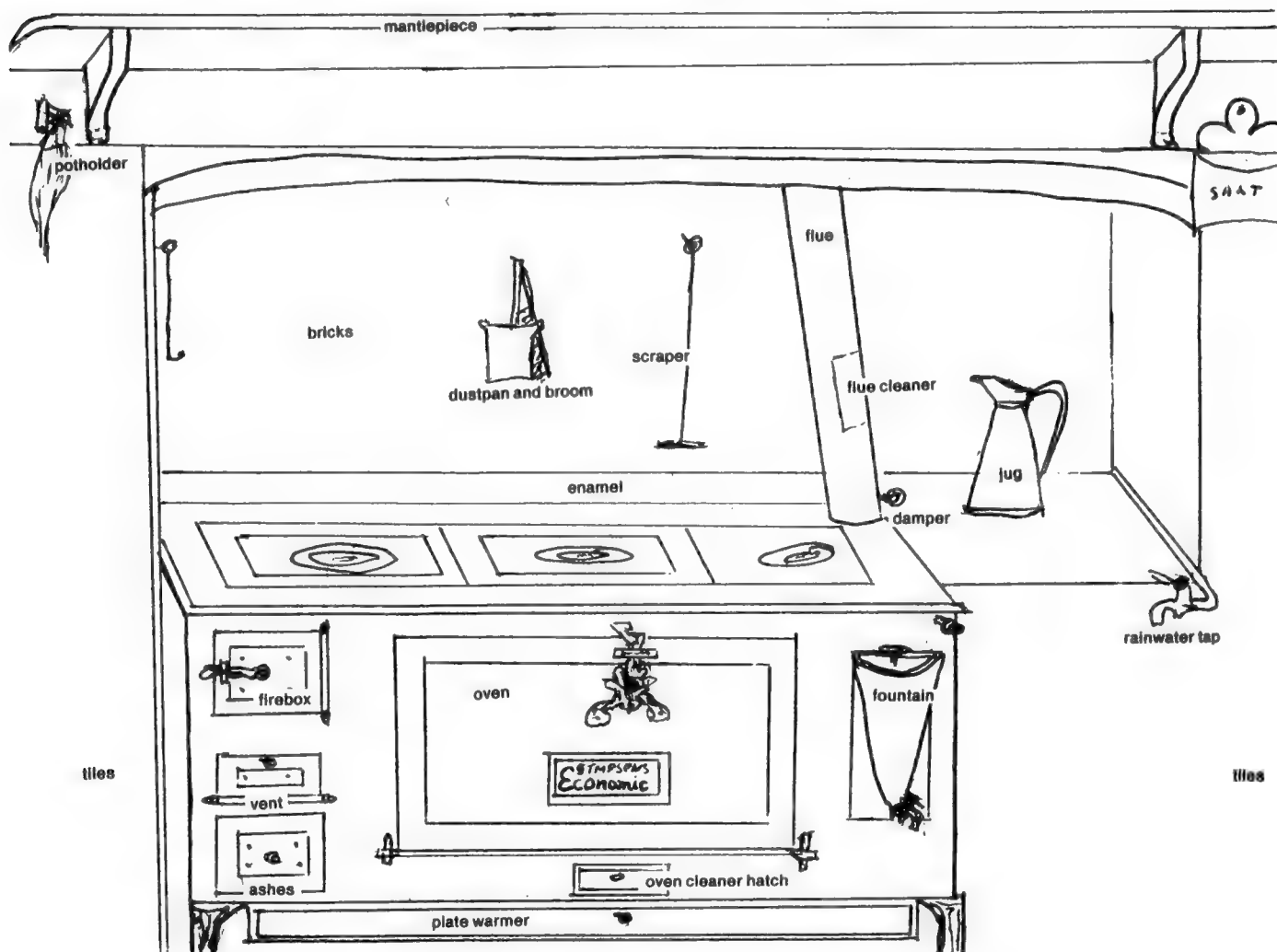
Along the bottom of the stove, now some 60 years old, is a plate warmer. It is rarely used in this household, except to dry wet shoes on winter nights.

To allow easy cleaning of pots and pans when cooking on the open fire (that is with the hotplates lifted), first smear the bottoms with fat. The blackness will wash off much more easily. For the hard places, use ash as an abrasive.

Now for oven management. This all depends upon

Cooking with Wood

By MAGGY RAGLESS



what sort of wood is burnt and the kind of day. I'll tell you of the quality of different woods we have burnt for some time and in some quantity.

Almond is the ultimate, being a slow, hot burner, good when using the oven for pastry etc. *Eucalyptus* (*gum*) isn't bad, but much heavier to handle. It is a slow burner, making good coals, useful in maintaining the heat between meals. *Vine* wood is of only medium heat and burns away quickly, making a lot of ash. Of course, not everyone has an old vineyard and orchard handy.

At the moment we are using *pine*. This also burns away quickly, but doesn't leave much ash, catches up and gives off a fairly good heat. It is ideal for cooking on top of the stove and is also very warming in an open fire.

A hint when sawing large logs of gum likely to be used in a stove — after cutting into lengths, make two sawcuts about two-thirds the way down. Even when they are dry and hard they will split with ease.

Judging the oven temperature is almost a lost art as now we are able to buy a thermometer, stand it on one of the two enamel oven trays in the middle of the oven, and then cook the goods when it has reached the required temperature.

The old way of finding out the oven temperature is the "paper test". Take a piece of white "butcher's paper" or newsprint about six inches square and place in the oven for three minutes. If the paper is noticeably brown, then the oven is probably too hot. Pale brown is just about right. If it is still white, add more wood and try again five or ten minutes later.

It's a good idea to compare your test paper with an unburnt piece so that you can easily see the difference.

To maintain the heat while the food is cooking, close the vent under the firebox and put on a medium piece of wood. About half way through the cooking process, open the oven door and peep in. If it doesn't seem to be half cooked, add another piece of wood. If it is cooking too quickly, remove the pan to the floor of the oven under the tray, or place a sheet of heavy brown paper or tinfoil over the top of the cooking dish to stop it burning. If it is a windy day and there is a strong draw across the chimney, turn the damper back a little.

If you like a continuously shining jet black stove like the ones you see in museums, cleaning can be a problem. These stoves aren't in use and have been painted with black paint. The basic ingredient for many recipes I've seen for stove cleaning is *black lead*, but as yet I've never seen it, let alone be able to say where you can get it. Perhaps someone else might know?

Zebo, a cousin of *Brasso* and *Silvo*, is very hard to get in suburban shops here. By keeping a look out in country stores, we have been able to buy a couple of tins now and then. The stove gets a good clean once a week, usually in the afternoon when it has cooled down. All it needs is a few drops on the stove, then spread with an old shoe brush and polish off with a piece of rag.

For a quick clean, rub the plates over with a piece of newspaper as this at least removes the grease and charcoal remains of spilt food.

If your milk boils over, sprinkle some salt on it immediately. This prevents it sticking to the stove and also stops the smell of burnt milk. The front of our stove is decorated with chrome, which is cleaned with fine steel wool dipped in kerosene to remove any blackness, then polished with a piece of clean rag.

A wood stove shouldn't be fitted into the chimney cavity too closely as it expands when heated and will crack the masonry. Mum often says ours will meet us at

the kitchen door one morning, as it is slowly creeping forward because sand at the back drops a little further each time the stove cools and shrinks. At the rate of two inches in 60 years, it will be a long time!

We have enamel sheeting along the back and one side. This gives us a good, warm, easy to clean working space, allowing the dishes to keep warm once they are cooked, to raise bread and to dry things out. The chimney cavity is excellent for drying herbs, tied in a paper bag and hung there for a couple of days.

This may be of some help to anyone who finds a Simpson Steel Economic Stove to welcome back into a home for a new lease of life. Sixty years of continuous daily life isn't a bad recommendation for a local product.

Happy warming and cooking, from Maggy Ragless.

OVEN DRIED STONE FRUIT

Wood or coal burning kitchen stoves are ideal for drying fruit in cooler areas where sun drying isn't practical.

You can use the oven while it is still warm after a day's bread making or cooking. Racks above the stove are not very efficient for drying fruit, though this space is ideal for drying herbs.

We touched on oven drying of fruit in EG12's *Keeping Food* section. Briefly, the best temperature to use is between 120-150° F and you will need to cover shelves in gauze or muslin on which to spread the fruit. Time taken is 4 to 6 hours.

Make sure fruit is fully ripe, fresh and not decayed. Wash, peel and cut up into slices.

Apricots should be cut in half and dipped in salted water, then spread out on the racks without the pieces touching. Heat at 130° F for two hours, then allow to cool and continue gradual heating until dried quite hard. *Nectarines* are done in the same way.

Choose the brightest-coloured *peaches*. Cut in halves, remove the stones and spread on shelves, cut side upwards. If you like, boil the peaches for a few minutes in a sugar syrup before drying to give them a better colour and flavour.

Plums may take six hours or more, but dry well. Halve and stone.

The fruit when properly dry should be free of moisture, yet not so dry that it will snap off when bent (and not burnt). It should be pliable, not brittle.

Store in screwtop jars or bottles, or in tightly-sealed brown paper bags in a dry place. Check regularly for insect attack.

Another method is to pack the dried fruit into firmly fastened plastic bags which, in turn, are kept in biscuit tins or jars.

STARTERS

For starters to light a wood stove, simply collect a few dead coals from last night's fire, put them in a tin or bottle (best with a lid) and almost cover them with kerosene.

They will soak right through and, when lit, will last long enough to get a fire going without paper.

—Dennis Corben

The Simple Life



By RUTH & FRANK MATHER

We often have in mind writing about our life here, but it is rather involved and, as you will know, there is always some other matter that wants attention.

Moreover, we feel as we are in our fifties, it is mostly the young ones full of dreams, and often with young children, who want to venture out.

We have some "rules of fist" if you would like to have them for *Earth Garden*:—

Be as clear as you can before starting out about what it is that you really want to aim at and do, at least for the next five years. And if you are two, married or friends, be quite sure that you both want the same thing or direction.

Have a trade or means of further income that you can rely on and sufficient cash (after buying land and house, if that) for about two years to tide you over the first building up times which might be absorbing — in time and money. Just believe that there will always be the unexpected, unaccounted in the expectations.

Be sure that you can live with yourselves, at least for a while, without getting on each other's nerves, or getting terribly lonely. It might never happen, but it is just as well to be quite self-sufficient a person as well as self-reliant.

Know that life out of the city and in the bush or country is just *different* and is not simple, but very complex and diverse. It requires you to have all senses awake, to observe, register all the time. It is a great sensation then, for which I have not adequate words, when you are finally on your own grounds, standing and *knowing* just what is growing, moving and living under your care. I add this bit so that these words are not like a "wet blanket".

One of you at least must be the practical one with hands and mind who knows the workings of machinery, cars, etc, preferably both, or all. This is indispensable as well, that you all should know about growing your fruits and vegetables, rearing your livestock and caring for it, about soil and climate and, not the least important, about food.

You should all be able to prepare meals and look after the house, otherwise some of you might just feel he or she is copping the hard parts, or the unpleasant jobs.

Know, or at least believe, that you will be working harder and longer hours than you have before or anticipated, that is if you want near self-sufficiency. You will be on your feet all day, so get *organised* before you get started.

Remember that modesty in lifestyle is the best guide if you want to live away from the cities (you can still have a comfortable home). *It will be worth it!*

By MARJORIE SPEAR

Dear Earth Garden Friends,

You ask for ideas to make Australians more self-reliant. Firstly, I think, try to keep healthy. We are meant to be healthy and should be living a simple life to keep our bodies free from disease.

Doctors should only be needed in case of accidents. Living simply includes walking barefoot, except in town, breathing fresh air and keeping away from tobacco-filled rooms.

Put into your body as little as possible of supermarket garbage. I am a very convinced vegetarian — it is the cheapest and healthiest diet available. I recommend growing as much as possible of your food. You must develop simple tastes and, like the poor Asians, be happy eating almost the same meal every day.

If your climate and soil will not grow peas or cauliflowers, do not buy them. Eat your pumpkin or cabbage and be inventive about ways of cooking and serving. I only occasionally seek ideas from recipe books. I seldom measure anything when cooking and plan the evening meal when harvesting food from the garden in the late afternoon.

Breakfast and lunch are home-grown fruit with porridge (home-ground), or soup (from the garden) when cold. Vegemite or nut butter or herbs add some extra taste. But keep your tastes simple. Meat eaters are very seldom simple eaters.

For 25 years I smoked cigarettes, but now loathe the smell of tobacco and have no hesitation in telling my friends "no smoking in my house". Smoking is a poison for the body and can be very harmful to you if others are smoking nearby. Children especially should be protected against tobacco smoke. I equally condemn pot smoking. To live simply we do not need stimulants — in fact they are harmful.

Alcohol is another stimulant which should be avoided except in small quantities. I drink no alcohol, but I make home-made wine for my friends from my surplus fruit. Perhaps a glass of wine can do little harm.

I am not a complete crank and enjoy a cup of tea or coffee when I am very tired. My energy sometimes fades as my activities are enormous. But I am over 60 and work far harder than many young people.

So be healthy, and secondly, waste nothing. My mother taught me economy as money was scarce in my young days. Be thrifty with goods and money and turn any God-made rubbish into compost. Man-made rubbish like plastic need not come the way of a person living a simple life.

Marjorie Spear, Harmony Farm, Kuranda, Queensland.

ACCESS to good things

GARDEN GRAIN

Small-Scale Grain Raising, Gene Logsdon, Rodale Press, Inc Emmaus, Pennsylvania, 1977, 305 pages, paperback

Recommend price \$6.95. Our copy from ANZ Book Co P/L

Gene Logsdon is writing here about non-commercial grain growing that is possible on a small farm or even in your own backyard. He has actually gone to his wheat "pancake patch", hand threshed two cups of wheat, ground the wheat in the blender, made batter, then pancakes (with maple syrup of course).

Grains dealt with include corn, wheat, sorghum, oats, barley, rye, buckwheat, millet, rice, flax and legumes. There are details of growing, threshing, storing, sprouting and using grains for human and animal food and utilising the by-products. Plenty of recipes too.



Triticale . . . is the first grain crop made by man rather than by natural processes. Triticale is a cross between wheat and rye, the name deriving from the Latin for wheat, TRITICUM, and far rye, SECALE.

Pioneers in the cornbelt survived some winters almost totally on corn. They cracked, ground, grated, boiled, parched, squeezed, flaked and baked it into porridges, cakes, muffins, dodgers and "pone".

Soil & Health Publications, mentioned many times in earlier EG issues, have now shifted to the above address, due to the retirement of the manager Mr Howard Ackerly. This is the book supply arm of The Organic Farming & Gardening Society and has a wide range of titles in the organic field. Send 20c sae for list.

SOIL & HEALTH PUBLICATIONS
Room 1, Third Floor, The Block
100 Elizabeth Street, Melbourne
Victoria, 3000

LEARNING EXCHANGE 1976 BOUND EDITION

Large format, 280 pages, \$3.50, from The Learning Exchange, 430 Waverley Road, East Malvern, Victoria, 3145.

This latest bound edition of the Learning Exchange monthly newspaper contains the whole gamut of a year's collected information, covering education, conservation, health, media, technology, contacts and resources, mainly with a Melbourne/Victoria emphasis.

A three page index gives quick access to articles of interest and relevant groups and organisations. The Learning Exchange is a unique resource of contacts, with its regular listings of people wanting to learn and others wanting to teach, plus selected "target" subjects such as the *City/Country* issue (no 46), *Working Women* (no 41), *Unemployment* (39 and 40), *Parks and Creeks* (37) and others are done in depth and done well.

There are regular reviews of books and publications and notices of events. Children's books and games are given special attention. A catalogue of titles is available from the Lexicon firm at the same address.

JAMS, PICKLES & CHUTNEYS

The Penguin Book of Jams, Pickles and Chutneys, David and Rose Mabey, Penguin Books, 1976, 184 pages

Pickling, preserving and jam making are ways of keeping food which alter the taste, texture and smell of food and give it a special quality. This handbook also includes sections on storage, drying, salting, making jellies, butters and cheese. There are quite a few classic recipes given.

Bound editions of earlier years are still available. Every school should have a copy in the library.



A typical review:

KITES FOR KROWDS OF KIDS

Ed Baxter, \$1.00

(postage extra)

Lexicon, 430 Waverley Road, East Malvern, Victoria, 3145

Ed Baxter, former strawberry grower, and now wizard kite-maker and kite-flyer, shares the secrets of how to make guaranteed-to-fly kites, in this little book. For only \$1.00, you can learn how to fly a kite, what tools and materials are needed, how to tie the appropriate knots, how to make bridles and spinners, as well as getting patterns of a dozen different kites. Intermingled with the factual contents are snippets of Ed's philosophy of kite-flying. If it's relaxation you're after, buy this book and go fly a kite.

THE SELF SUFFICIENCY SHOP

C/-PO Mount Nebo
Qld, 4520

Vic Calthorpe started the Self Sufficiency shop in response to an obvious need for goods and services by people trying to become self-reliant.

The shop can supply fruit trees, nut trees, and native trees, mushroom spawn and compost, organic manures, seeds, plants, garden tools, building equipment, corn grinders and stone mills, bees, honey, beekeeping equipment, strong clothing, water tanks, bottling equipment, camping gear, herbs, grasses — and baby ducks at \$2.00 each. Send sae for information.



DOUBLE STEAM CAR E13 OF 1924

FOR STEAM FREAKS

Light Steam Power, Kirk Michael,
Isle of Man, Britain

£st4 per year (six issues) (send international money order)

This is the international specialist magazine for external combustion engines and gearless driving, describing modern steam cars as well as vintage vehicles, steamboats and fixed engines.

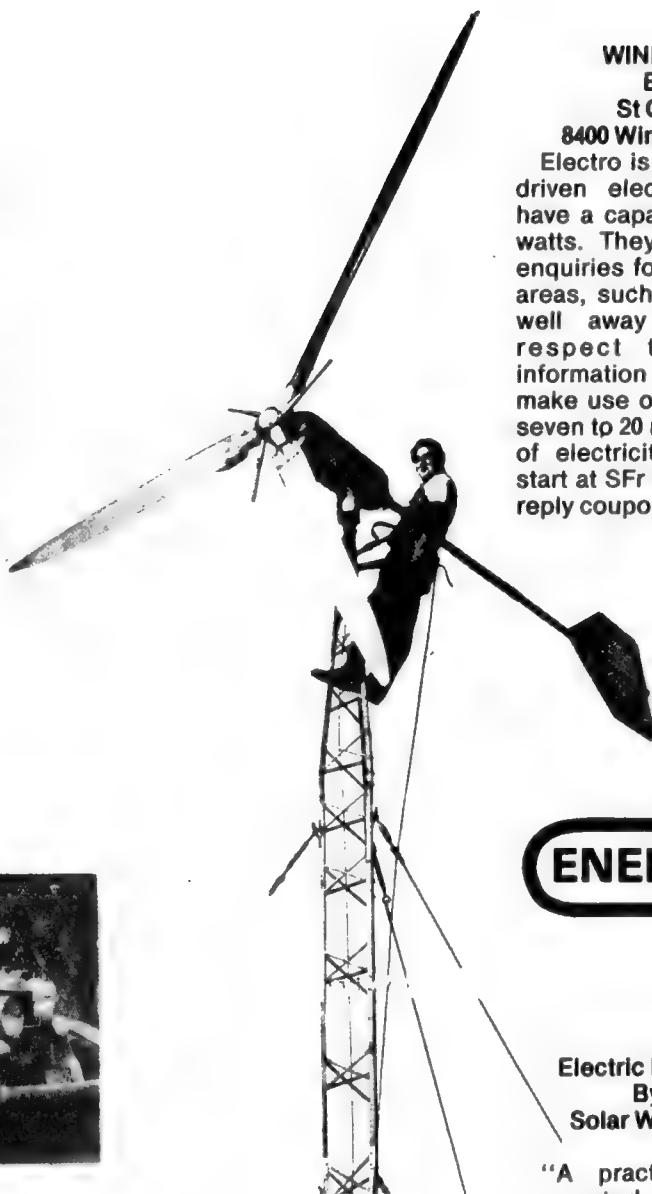
Recent issues have expanded to cover alternative fuels such as gas, wood, peat and solar. Write for a range of dimension drawings.

The Stanley Steamer broke the world land speed record with a 127.65 mph at Daytona Beach in 1907! Modern steam cars are almost free of exhaust gas pollution.

WIND GENERATORS

Electro GmbH
St Gallerstrasse 27
8400 Winterthur, Switzerland

Electro is a Swiss maker of wind-driven electric generators which have a capacity of 150 up to 12,000 watts. They will welcome serious enquiries for installation in isolated areas, such as mountains or farms well away from roads. Please respect this and send for information only if you are able to make use of a wind generator on a seven to 20 metre tower and storage of electricity by batteries. Prices start at SFr 4000. Send international reply coupon if enquiring.

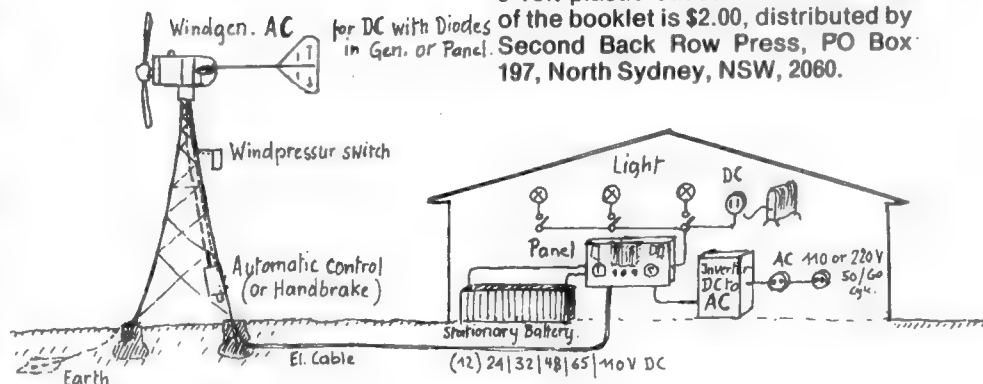


ENERGY

Electric Power from the Wind

By Henry Clews
Solar Wind, Maine, booklet
40 pages

"A practical guide for wind-generated power systems for individual applications" is the booklet's sub-title. It is this and a help in deciding whether or not you want a self-sufficient wind-powered electric system. Good discussion of Australia's *Dunlite* (see EG5) versus Switzerland's *Electro* plants and a plug for our *Century Storage Battery* 6 volt plastic cased batteries. Price of the booklet is \$2.00, distributed by Second Back Row Press, PO Box 197, North Sydney, NSW, 2060.



Fire and the Bush

By RUSSELL GRAYSON

1. Triumph of the Eucalypts.

Fire is one of the most spectacular events in the Australian bush — and much of our bushland owes its character to fire.

Many *Earth Garden* readers who have made the move from city to country, now live in the extensive bush and woodland areas of this country. These areas, by their very nature, are not only fire-prone, but also fire-generating.

This affinity of areas of bush with fire developed through the peculiar evolution of our tree species and forests. At least since the Australian continent has drifted north into the sub-equatorial thunderstorm belt, fire caused by lightning has been a significant factor in the evolution of our tree, shrub and grass species.

Before the dominance of the eucalypts, during a moister climatic period, the east coast was dominated by forests of native pines, such as the Hoop Pine, Bunya Pine and Kauri Pine, all of which are still found in isolated pockets in the north of Australia. The evidence for this has come from Australian National University pollen analyses of lakebed deposits from volcanic-formed lakes on the Atherton Tablelands.

It is probable that the Aborigines' use of fire caused extensive change in vegetation patterns. The techniques of "Firestick-farming", the regular burning of the bush to keep migration routes open and to attract animals to graze on the regrowth (thus making hunting

easier), altered large areas of the continent.

In Tasmania, it is probable that many of the extensive areas of Button Grass plain and the open grasslands of the Midlands were created by the Aborigines' burning methods.

Temperate rainforest, dominated by the Antarctic Beech (*Nothofagus cunninghami*) is the climax vegetation of much of the area which now supports only Button Grass or heathland.

In eucalypt forest Aboriginal burning was usually in fires of low intensity, doing little or no damage to the trees and other vegetation.

European settlement changed the traditional burning patterns. Fire frequency decreased where the Aborigines were displaced. The result was a buildup of fuel which caused more intense and more devastating bushfires.

An example of the interaction of fire with eucalypts is the Mountain Ash (*Eucalyptus regnans*), a tree species (and the world's tallest hardwood), which thrives in the moist valleys and slopes of southern Australia. In Tasmania, this species is known as the Swamp or Stringy Gum.

The major difference between Mountain Ash and other species of eucalypts, where fire is concerned, is that Mountain Ash dies after the passage of severe fire due to its thin, poorly insulating bark. Other eucalypts have a thick protective bark, which helps them survive all but the most severe fires.

Unless a fire passes through the Mountain Ash



forests during the lifetime of the tree (about 300 years), the seed capsules will not open and the forest will not regenerate. As a result, temperate forest will move in and colonise the area. Like other eucalypts, the Mountain Ash forest generates the right conditions for fire by building up a supply of litter on the forest floor, in the form of a slowly rotting layer of leaves, bark and branches.

Fire in the Mountain Ash forest, if it is severe enough, will kill the mature trees and produce a nutrient-rich layer of ash on the forest floor in which the saplings of the new generation of trees germinate and commence to grow. This forest gets its uniform growth of trees because the mature trees are so often killed, so the succeeding generation of trees is all about the same age.

Fire is used now as a management tool in commercial forestry in *regeneration burning* — to bring on new trees after the mature timber has been harvested. Fire is also used to control the amount of fuel available to random bushfires by *prescribed, or fuel reduction burning*.

During suitable weather (windless, slightly moist and cool) a low intensity fire is sent through an area, thus consuming the fuel which would have supplied a more intense summer fire. There is some argument that this practice actually encourages the growth and dominance of fire-adapted and highly-combustible grasses and shrubs, thus actually increasing the intensity of bushfires instead of decreasing it.

The quick recovery of eucalypts after a bushfire is due to the unique fire-adapted features of this species, developed as a result of its evolutionary coexistence with fire. As well as fire-resistant bark, eucalypts have *epicormic* shoots, which are dominant buds buried in the trunk and lower branches; and *lingotubers*, which are underground swellings composed of food material. Both of these produce new shoots after a fire and promote rapid recovery of the tree.

Most ground dwelling animals can survive fire by running away or by burrowing, as is the case with wombats. Koalas are the most vulnerable to bushfires. Wildlife recolonises the regenerating burned-out areas from surviving islands of unburned vegetation, usually along creeks or in gullies.

2. If bushfire comes . . .

The best source of information about fire protection and control, is your local bush or rural fire brigade.

Total fire bans may be proclaimed by State or local authorities during the summer fire danger period. On total fire ban days all fires in the open are prohibited. There are no exceptions to this: fires in properly constructed fireplaces, barbecues and portable stoves are all included in the ban.

To protect your home and buildings, keep tree branches clear of roofs and chimneys, remove undergrowth around buildings and clear rubbish from gutters and downpipes. Leave a garden hose connected to the tap, with enough hose to reach all parts of the house. Use a tap standing in the yard for this purpose, as a tap against the house walls may not be accessible during a fire. It is also advisable to close in space underneath roof eaves or under floors.

Fire protection for farms can also include constructed firebreaks and planned access to water

supplies. There are backpack fire extinguishers on the market operated by a handpump which are quite effective against low intensity outbreaks.

If fire threatens your house, the following points may be useful:

- Block guttering and downpipes and fill roof guttering with water to prevent sparks setting any rubbish alight.
- Wet down the windward side of the building, nearest the approaching fire.
- Have wet bags and blankets ready for use.
- Be sure everyone is protected from radiant heat by being appropriately dressed — don't wear synthetics, as they burn or melt rapidly. Wear boots.

When a fire approaches, shut all doors and windows tightly, block up gaps under outside doors and remain inside on the side of the building opposite from which the fire is approaching. After the fire has passed, leave from the side from which the fire is receding and immediately check the building for sparks or outbreaks of fire.

Do not attempt to escape in a car through heavy smoke and flame, unless it is *certain* that there is a definite clear path. You are safer inside your house.

If you are caught in your car in a fire — lay on the floor, cover yourself with whatever insulating material is handy to protect you from radiant heat. The petrol tank is most unlikely to explode. This was demonstrated in the 1967 fires in Tasmania.

If you are caught in the open during a fire, you should try to move to burned ground if at all possible. Otherwise, the area around you can be burned by lighting a line of fire 10 metres across the slope at right angles to the wind. Step on to the burned area.

It is important to take all measures to protect yourself from radiant heat. Take cover in any depression in the ground and cover yourself with sand, dirt, clothing, etc. You may take shelter in moving water such as creeks or rivers, in below-ground dams, but *never in above-ground water tanks*.

If smoke is dense, limit your breathing. There are usually pockets of fresh air close to the ground.

Do not run uphill or away from advancing fire unless there is a safe refuge at hand. Also, don't run through flames unless you can see through them clearly. You will not get through flames more than two metres high and two-to-three metres deep.

Burns should be treated by immersion in cold running water and covered with a clean dressing. Medical help should be sought immediately. If the fire victim is conscious, give he or she water. Always treat for shock by keeping the victim warm, but not hot. Reassure the patient. Do not apply ointment, lotions or any other substances except water to a burn. It will only complicate matters.

In Australia's eastern States, severe fire seasons have occurred every 13 years since 1900. There have been moderately severe fire seasons every six-to-seven years after each severe fire season.

Bad years are usually preceded by wet seasons which cause heavy growth in bush and grassland areas. Because of our fire-prone vegetation, special precautions are necessary for those of us who live in bush and rural areas. You could think of joining your local bushfire unit. In this way you will be protecting your own and your neighbours' life and property.

By "THE COLLECTORS"

We have been interested in early Australian for many years, but it is only in the last few years that we have been collecting kitchenware and farm machinery used by the pioneers.

As anyone who has the collecting bug knows, the problem soon arrives — where do you display your collection? Fortunately, our place covers an acre, so at least we had enough space available.

The idea emerged of building a cottage reminiscent of the Australian way of life around the turn of the century.

When we bought our land, we inherited a very dilapidated asbestos shed. At first we thought we would pull it down, but we had a change of heart when we examined the 17-inch thick concrete floor. We decided to line the shed with six-inch jarrah boards and to clad the outside walls with face cuts.

Our search around second-hand yards turned up some windows with small panes of glass and a lovely old door, half-wood, with the upper section of small glass panels, which would allow more light into the shed.

We visited the local timber mill for face cuts of jarrah with bark attached. We set the windows back as far as possible to give the illusion of depth and used rough timber on the window sills.

A timber-cutter managed to obtain saplings for the verandah posts, also with bark attached. These had forks for the bearers. We used only saplings of species native to the area, so that they were in harmony with the landscape. Some of the charm of the early bark, stone and mudbrick cottages of the pioneers must surely have been this use of local materials.

After adding verandahs back

and front, we at last had the makings of an Australian-style cottage. For the verandah flooring we used well-weathered railway sleepers which gave an aged look to the cottage. We even cut a section in the iron on the front verandah roof so that we could keep an existing tree.

The interior was lined with jarrah lining boards. There is much beauty in the warmth of the wood.

We managed to obtain a lovely old wood stove and this was set in position with a clinker brick hearth.

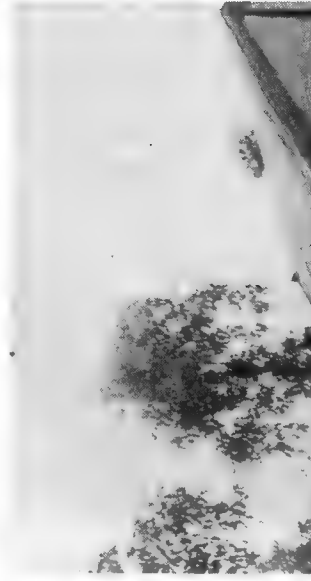
The concrete floor was covered with a fine natural matting, which is a neutral colour and does not dominate the room. Scrubbed pine furniture has been used and the only colour we have introduced is Royal blue in the china, rug and cushions, which gives a continuity to the room.

Old kerosene lamps were wired with 24-volt headlamps in place of wicks, and mantles and placed near the windows. The lamps throw a soft glow in the evening when we light up our cottage.

In the early stages of planning, we thought about shingles for the roof, but as we live in a fairly bushfire-prone area, we decided we had enough problems with the bark. Anyway, we love the sound of rain on the iron roof!

We were lucky to get a section of post-and-rail fencing — complete with moss and lichen — and this gives an air of completeness and serenity around the cottage.

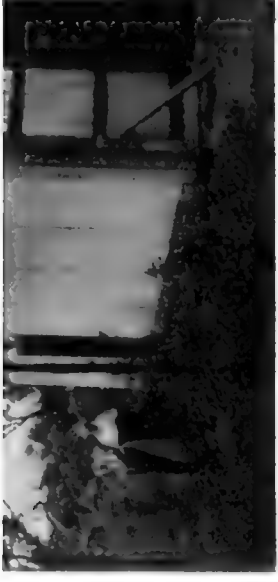
Now we've entered another interesting stage in our collecting. We've bequeathed our Australian collection to our State Museum, and we are now engrossed in cataloguing and recording as many details as we



can find about each item.

We've enjoyed every aspect, from the planning and building of our cottage, to placing the chair near the fireplace. But the highlight of it all has been the friends we've gained and what we've learnt about our pioneers and their lifestyle.

Collectors' Cabin



Sunrise Farm

By FRED KOCH

Sunrise Farm is an organic farm and the site for a New Age intentional community, situated not far from Buchan in the foothills of the Great Dividing Range in eastern Victoria.

I moved here 2½ years ago from Arkansas in the United States, with the idea of setting up an organic farm. I purchased 1450 acres of land with this expressly in mind.

About a year ago, the idea of splitting the land into two projects came up. One project was the organic farm, the other a community of spiritually-minded persons seeking to live and work in company with similar individuals.

The farm itself consists of 875 acres, of which about 100 acres will be used for crops of various sorts. About 500 acres will be grazed by Angora goats, donkeys, a few horses and coloured sheep.

We are raising Angoras and upgrading bush goats to Angora purity. There are now 19 purebreds and 213 goats in various stages of upgrading. We are also in the process of developing a small herd of naturally polled dairy goats.

The other 275 acres will be left as bush. On this land we are building six small cabins, a communal eating centre and an activities building, which will probably be a dome.

These facilities will be for various growth activities, geared for the public, probably in groups of 15-25 people. Subjects will be Hatha Yoga, organic farming, massage and diet forms. These will probably be of one week duration and mostly run during summer, when organic foods are available fresh from the garden.

We will be looking for qualified persons to lead these events and, provided such people manifest themselves, we could begin this around December, 1977.

We will need a person, or persons, *well versed* in dome construction to help build a 36ft dome next summer.

During this last summer there were an average of 12 people living and working at Sunrise Farm. We lived in two well-equipped houses. Everyone received \$2.50 per hour for their work, with the usual total hours being between 30 and 40 a week.

Each person contributed \$11.00 a week towards food costs. We eat very well, but can keep costs down as we are able to buy all the foods that we don't produce at the moment — beans, lentils, rice, etc — at wholesale prices.

There are enough bedrooms for privacy and most meals were taken together. We evolved a system of rotation of cooking so each of us had a day in the kitchen. This person was responsible for cleaning up after breakfast, preparing lunch and washing up.

Breakfast and dinner here is up to the individual, due to the various diets being observed. All food was

and is vegetarian.

The main jobs last summer were cabin construction, fencing, putting up tree guards, picking up sticks and stones from newly-established pastures and care of animals, such as trimming goats' hooves.

Now the population has dropped to five, due to the travelling bug biting several members. Some will return in spring. There is a fairly high turnover of residents — over the past two years more than 40 have stayed for various periods of time, ranging from two to 18 months. The average would be around six months.

To sum up, the purpose of the farm is to provide a learning situation for many people in areas relevant to the New Age. It will not be an isolated pocket in society, but a bridge and a possible good influence on broader society.

Spirituality. The word has many meanings. Most people equate spiritual with religion. We do not. There are no organised religious or spiritual practices on the farm.

Various people observe certain practices, and this is seen by everyone as good. However, each person has their own set of experiences to deal with and here he or she has the freedom to work it out the best way they can.

The main practice developed is love. With pure love there is no need for many rules, and tolerance for each other is enhanced.

In my case I have a teacher in India, with whom I am growing. However, the guru-disciple relationship does not extend beyond the guru and the disciple. Therefore my own ideas and views remain apart from general conversation.

THE COMMUNITY

The land area of the community is 575 acres. We can get 16 building permits. About 200 acres are suitable for broadacre crops. There is good orchard land as well as land suitable for intensive cultivation.

The rainfall of 36 inches yearly is adequate and well distributed and the climate is mild enough to grow citrus through to pears. The growing season is seven months long for most vegetables, hardier vegetables growing all winter. Some winters bring light snow once or twice, and some winters bring none.

Probably not all community members would be into using the land for farming. A variety of skills and crafts would add a good balance to community life.

The basic organisation would consist of a corporation which would own the land. Sixteen leases would be issued to families and individuals willing to call the place "home" and treat the land with the respect it deserves. Each lease, covering a two-acre parcel, would be selected by the members and used for their own house and garden.

The rest of the land (543 acres) would be used according to community decisions.



The cost would be \$6000, payable over six years at \$1000 per year. This would cover the cost of the land and rates for this period. After this, only the rates would have to be shared. A family unit would be counted as one member and have one vote.

Dwellings are to be commenced within one year, be half-completed within two years and habitable within three years. Non-fulfilment of this requirement may result in termination of membership. This provision is to screen out all investor types who are not serious about joining the community.

All dwellings must comply to building code. We seem to have a fairly reasonable building inspector. The plans must also meet the approval of other members to avoid spoiling the natural beauty of the land.

We are looking for people who do not use drugs or alcohol to alter their interpretation of reality. As an aid to harmony and unity, the community would be vegetarian and we wouldn't keep animals for meat purposes.

The farm has some agricultural equipment, which would be shared on an expense-covering basis. This includes a tractor and a cement-mixer.

I am taking the initiative of cultivating the suitable areas on the community land by sowing rotating crops of oats, peas and lupins. The land has only been used for grazing cattle in the past and it will take several crops to put it into top farming condition. The farm owns a combine harvester, so organic grain production is a possibility.

We have done some trial planting on ½ acre. On one plot we planted 30lb millet seed and harvested over 800lbs. On another we planted 10lbs sunflower seed and harvested 300lbs. Excellent returns have also occurred with maize and buckwheat.

Our bees did well this year, so perhaps someone will come along to do this on a larger scale than our present three hives?

This is the plan. The groundwork has been started. Now all that is needed are the people. Anything is a possibility — depending on what the members want to do.

Sunrise Farm is currently looking for a family or couple to join it full time, starting next spring. I will be in America between June and the first week of September, so after September 10 would be the best time space to visit the farm and community.

Visitors are welcome. We appreciate it if you can provide your own housing and meals. There is a motel in Buchan, 15 miles away, and a caravan park. Camping on the farm is also fine. Please give a few days notice of your arrival by phone. The number is (051) 55 0215.

Words are mere pointers, so the best way to experience the life here would be to visit. Please don't bring drugs or the vibrations that go with that scene.

For fuller information, please send *sae* to: Fred Koch, W. Tree, via Buchan, Victoria 3885.

PHOTOS: Top — Barry and Carolyn with part of our pumpkin harvest.

Middle — Carolyn's Mongolian-style yurt being built.
Left — Part of the triticale harvest. Triticale is a cross between wheat and rye, with several advantages over both.

land and the people

1. Land is Life! We must work the land directly to conserve and nourish life. Agriculture is the one mode of production with which humans can't dispense under any circumstances.

2. Land ultimately cannot be owned by anybody. It is constant while human life is transient upon it. We should leave the land at least as fertile and vigorous as we find it, in order not to diminish the chances of future generations.

3. Present agricultural practices aim at maximising yield per person and machine. This is both alienating and, in the longer term, non-economic.

4. Agriculture can only be revitalised by more people being engaged in it, on the basis of co-operation rather than competition.

5. At present, land in Australia is "owned" by a small minority, and worked by a small minority. Our cities are bloated parasites, their residents sickening, physically and mentally. Much of our land is poor agriculturally, but with changed methods, ie organic, greater food self-sufficiency can be achieved, with tremendous benefits for the individuals and society's well-being.

6. For many reasons, economic and social, a new balance must be found between city and country. The bulk of our food costs are in their handling and storage. More people need to work the land collectively and in the public interest, and we need to establish "new towns", integrating production and consumption.

7. At present, nearly all "development" is residential, traffic, mining or industrial. How the inhabitants of new towns are to be fed is never considered; it's taken for granted.

8. With permanent redundancies in some major industries becoming likely, a "return" to the land is becoming a vital necessity.

9. The "new farming villages" must aim at high yields/acre, using ecologically sound practices. To

this end, organic agriculture, science and industry must work hand in hand.

10. In new villages, gardening and farming should co-exist with crafts and small-scale industry. Surplus production would enable exchanges with areas producing heavy industrial items.

11. The economics of the "new towns" must have the satisfaction of human needs at their centre, which means that work itself must be satisfying.

12. It is well known that people who would rather stay are still being driven from the land, as there are many who would love to get "back" to it.

13. It is time that those who broadly agree on these urgent issues join and work together.

Reprinted from *Alternative Canberra*, who adapted the article from *Undercurrents*.

Alternative Canberra is interested in meeting genuine workers and creative people to develop a "village" concept they have for the 10 acre farm they are buying near Canberra.

We are five people so far. The 10 acres is roughly half apple orchard and half available for other uses. We'd like to talk with you about your ideas and ours.

Alternative Canberra, (Sue, Wendy, Bob, Bill and Suzanne), 10 Beltana Road, Pialligo, ACT, 2609.

Alternative Canberra is a fairly regular "journal of autonomy" for our national capital. In issue No 14 there is a major piece on town planning in the ACT, with suggestions for alternatives to the NCDC's vision, or lack of it. A plan in fact for an Alternative Canberra! Other pieces include energy briefs, neighbourhood politics, book reviews and letters.

For a copy, send 40c, plus 20c postage, to the address given.

"Shambala" needs more shareholders. We have 630 acres, 5 miles from Bellingen, NSW, 80 acres cleared, arable land, co-operative owned. Shares are \$2500 per person. Presently there are two houses suitable for living in, more will be built when needed.

Interests in our existing group are many and varied, including bio-dynamic farming, organic farming, crafts, alternative energy, spinning, weaving, pottery and music of course. Climate is sub-tropical, land undulating with good rainfall.

For more information, write to Brigitte, 24 Oratava Avenue, West Pennant Hills, NSW, 2120, or phone Dorothy, Sydney 496 2226.

We are a group of people interested in going in with someone who has land on or near the Atherton Tablelands. Some of us have small orchards and own our own land. All have steady jobs. We are interested only in genuine persons who love the land, not "hippies" or druggies or whatever. We have knowledge to share and are willing to learn.

Drop us a line, Mike Devon, C/- PO Box 176, Toiga, Qld, 4882.

Late in 1975, a group of friends with more or less determination to change society — not just escape from it — (ie a political commitment), formed a co-op and bought some land at Dargo in eastern Victoria. Although nebulous, there was a general aim of establishing the place as a fairly self-sufficient rural community, without cutting ourselves off from the city, so, eventually, the rural side could support urban activists, a food co-op, kids hassled by city living . . . (the dreams floated a long way off). To cut this short, we need more people (money is not essential).

If you're interested, we can send you a blurb with more background or, if you're close, come and visit.

Black Rose Co-op, C/- 72 Barkly Street, North Fitzroy, Victoria, 3068.

Anyone interested in renting/leasing an established orchard at Bilpin, NSW? There are 1200 fruit trees — apples, peaches, plums. Orchard does not cover the whole property (42 acres).

Please contact: Halders, Lot 100, Guntawong Rd, Riverstone, NSW, 2765.

Rural commune, northern NSW, 170 acres, rainforest, creeks, 60inch rainfall, some clearing. Six shareholders in all, two shares are for sale at \$3500 each. Aims: to help each other build homes, garden and live a better life. Most musically inclined.

If interested, first write for direction to farm, Adrian Harkin, Brays Creek. via Tyalgum, NSW, 2484.

Land Lines is a free service for Earth Garden readers. It is intended to help those seeking to buy or sell land, or searching for it, and those joining together for group land buying or other reasons.

Readers must give their full names and addresses as proof of their sincerity. They have the responsibility to thoroughly check all deals. Please keep them short!

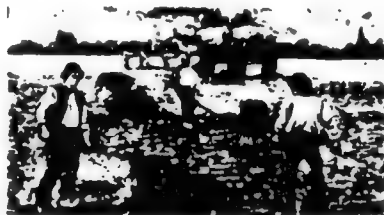
We are looking for some land on which we could become fairly self-sufficient, no more than three hours train travel from Sydney. It should have permanent creeks, some flat land (for the house), some bush, some cleared (for vegetables and grazing). Primary and secondary schools need to be fairly close. We're hoping for 25 acres or more. We want to build a pottery and kiln. Can anyone help please?

Yours sincerely, Cecily Stead and Adrian Haar, 8 Epping Drive, Frenchs Forest, NSW, 2086. Phone 451 9423.

8ha property for sale at Telowie, set in the lower Flinders Ranges with beautiful views of the hills and gulf waters, 13 miles north-east of Port Pirie, South Australia. The house is a five roomed stone cottage with floor coverings, electric stove and 60 gallon hot water system. There is a large shed, a 20,000 gallon irrigation tank and sundry equipment. Ideal for a market garden, as the growing season extends throughout the year. Negotiable price of \$16,000.

Please contact: John Odgers, Box 151, McLaren Vale, SA, 5171.

land lines



SHALOM (see EG6)

195 acres, organic vegetable gardens and orchards, established for 12 years, 12,000 pine trees, 400 eucalyptus, 500 assorted fruit trees, including citrus, nuts, bananas, guavas etc.

Three bedroom home with electricity and phone, septic. Closed in front verandah, built-in furniture, underhouse workshop, laundry, photographic dark-room, storage, garage, three cabins, sheds, large flower and shrub garden, rockeries, bush house, paved walks. Price \$65,000.

Ilse Ledermann, Obi Obi, via Nambour, Qld, 4560. Phone Obi Obi 17.

I have 23 acres (9.4ha) of fairly level open forest country for sale, 10 miles from Cooktown, fronting Poison Creek Road. It is freehold and unimproved. I am asking \$5750 — rates are only \$10.

Please write to: Fred Heinrich, Wyndham Road, C/- PO Wyndham, NSW, 2550.

We are living in Woolgoolga, NSW and have found an unbelievable 181 acres overlooking the sea, about 15 miles north of here. There are flat areas, with fertile soil, a permanent creek, eastern aspect to the sea, giant forests — the works. The land costs \$10,000 freehold and it's all bush.

If interested people write to us, we could secure the land as a co-op, or whatever is suggested and approved by all financial parties. We have about \$1500 (with a little effort) and are strictly conservationists and organic gardeners.

Love, Tim & Vicky Dalton, C/- PO Woolgoolga, NSW, 2450.

Middle-aged couple with 56 ha, starting a piggery, garden, etc. Is there another two like us, pretty square, but sick of fumes, pollution and hassles? If so, we would welcome you to our place. Non-smokers please. Property north of Taree, NSW.

For details: Barry & Shirley Avery, Hannam Vale, NSW, 2492.

Maybe someone would like to buy an old-style family home in the north coast NSW town of Grafton? It's weatherboard, 2-3 bedrooms, sewerage, verandahs, electricity, shed, carport, good loamy soil that grows anything. My mother grew enough vegies, lemons, oranges and paw-paws to feed a family of six.

As my family has owned the land since the town was settled I can guarantee it is out of flood reach though land on either side has been flooded in major floods. It's a narrow block, about 34ft frontage, opposite public schools and one block from Grafton High School. I am very weary of being ripped off by agents. The price is \$10,000. There is an electric bath heater, but only a wood stove.

Clare Hampton, C/- Mrs M. Bowles, 36 Fawley Drive, Redbank Plains, via Goodna, Qld, 4300.

I have a house and 1½ acres and would like someone to share it with, preferably a vegetarian. Financial contribution above monthly expenses isn't necessary. Life here is quiet and cheap, and the local people are friendly and helpful.

Keep happy, Sabrina Mowinkel, 58 Gordon Street, Mount Morgan, Qld, 4714.

For sale: 665 acres freehold land, low rates, rich brown soil, ideally suited for organic gardens and crops. There is 100 acres of tropical rainforest, the rest flat forest with a few small ridges. Shed, 80ft x 20ft, and log cabin, 15ft x 20ft, permanent creek and lagoons, only 22½ miles from Kuranda, North Queensland. Two titles.

B. D. and F. L. Barracrough, Box 47, Kuranda, Qld, 4872.

Myself and a friend, Noddy Belzer, wish to sell our half-share of a 220-acre farm near Coffs Harbour, NSW. Price is \$13,500 ONO, Kalang River, near Bellingen, fertile, lush country, river flats, mostly cleared. Fruit trees growing, forest on slopes, pleasant people in valley. School bus passes.

Contact: Cathy Purcell, 71 Holmes Road, Moonee Ponds, Victoria, 3039. Phone 67 2935 (business hours), or 370 2206.

We have a 6¼-acre partly-cleared rainforest for sale, situated about 16 miles from Malanda at the end of Ware Road, Topaz. It is secluded, with a small permanent creek. Good, solid 20ft x 20ft masonry block cottage, plus carport, partly furnished with semi-combustion stove. No power on property, but nearby Shed, 1000gal tank.

The property is a special lease, which may be made freehold on application. We are asking \$8000.

Please write or see us for further details: Ann & Egbert Kleeman, MS 1575, Malanda, Queensland, 4885.

Our mud dome and sod-roofed bathroom, shown in the photos, are on our 11 acre property in the Victorian north-east hill country, not far from Moora Moora near Healesville. We support *Earth Garden's* ideas, especially on soft architecture and self-sufficiency, and we would like to sell our land to an EG reader.

The block is a half hour drive from Melbourne, located high up, with fabulous mountain views, a 50-inch rainfall and natural tall timber scattered with Blackboy trees and native shrubs.

It has an all-weather gravel road and two dams.

Our present accommodation consists of a highly successful experimental free-form mud dome, about 13ft in diameter and 12ft high. It has a sleeping loft, old-fashioned efficient wood stove, sink, running tank water, semi-circular table-seat and a serviceable mud floor.

Basic construction is an interwoven sapling and wattle framework, to which chicken wire was stapled, providing a reinforced base on which three layers of mud and 5 per cent cement were then applied by hand.

The inside is rendered with the same mix, while the exterior was weatherproofed with two brushed layers of bituminous emulsion. Re-

cycled car windows provide most of the lighting.

The bathroom and toilet is a separate building a few yards away, using the same method of construction, but following a rectangular floor plan, with a sloping sod roof — another successful experiment. Rain water is filtered through and collected from the sod roof in a 500 gallon tank and then pumped uphill to a 1000 gallon tank. This provides ample storage and pressure to supply hot and cold water to the dome and bathroom.

A 25 gallon insulated hot water storage tank in a nearby tree holds boiling water heated by the wood stove in the dome. Nothing like a steaming hot shower in the bush, with heat supplied by the bush!

This property would suit somebody interested in building a permanent home, or using it as a unique bushland retreat. A mud-brick house on this land would be most appropriate due to the availability of quite unusual terra-cotta coloured clay.

We are selling so that we can finance another property elsewhere, to pursue our individual way of life.

Inquiries: Bob & Chris, 285 Canterbury Road, Canterbury, Victoria, 3126. Phone 836 8074.

We have a 164-acre property, 15 miles out of Lismore, NSW, and have been given council approval to cut off a 20-acre portion. The farm encompasses the whole of a valley; hills on both sides are covered in trees, with about 80 acres cleared and grassed. Soil is red volcanic and there are three dams and two creeks on the property.

The 20-acre section is half cleared and is at the end of the road, ensuring privacy. The price is \$7800 and we want the person or people interested to be vegetarians, with a desire to move on to the land permanently.

Contact: Steve Strong, PO Box 69, Ulladulla, NSW, 2539.

I am a musician and nature lover in search of an ideal lifestyle. My lady and I need the right company, idealistic dreamers who wish to live with their spirit totally free.

I am a lead guitarist/composer and have many years experience with bands. I have a drummer friend who is heading in the same direction, also experienced and competent. We would like to find a singer/bass guitarist who would like to be part of our venture.

If a band is willing to play a variety of music, there is enough work in country areas to make a comfortable living. If a few acres could be rented or secured, then the cultivation of vegetables, etc could be fun and also most practical.

Write or call Gary Robinson, 41 Baker Street, Merrylands, NSW, 2160.



more land lines

We have 3½ cleared and fertile acres in Kyneton, Victoria, one hour's drive from Melbourne, which we visit on weekends to garden a small part. We would like to have a family who wants to live in the country and practice organic gardening to occupy the greater part of the land and support themselves through gardening, chooks and geese, etc.

In return for occupancy, we would charge a nominal rent to cover land rates and part of the cost of a water system and electricity we plan to install, but we are willing to accept labour as part-payment (gardening, fencing, etc). Please, no goats, as I will be planting a fringe of fruit trees around the entire property.

George & Monya Ely, 17 Bernborough Avenue, Balwyn, Victoria, 3103. Phone 85 4066.

We own 40 acres of beautiful bush with enough land to farm (about 3 acres). There is a shack and about 6 acres fenced to hold a cow or goats. Now that we have our larger farm, we would like to sell to some Earth Garden people. We want \$7750 for 40 acres freehold, and can assist with finance to the right folk.

Love & peace, Eddie & Roslyn Hayes, 106 James Street, Punchbowl, NSW, 2196.

This is an appeal for help and advice on finding a different way of living. We are convinced that western society, with its gross exploitation of non-renewable resources, is heading for disaster, but we are at present still participants in the great consumer binge for the want of a viable alternative. We would like to be part of the attempt to found a new society which is able to live in harmony with the environment.

Leigh is in his late 30s and a journalist and Christabel is in her early 30s and a pre school teacher. Orlando is five and Gawain is three. We have the money to effect a change in the way we live, but not the know how, or the contact with like-minded people.

We would like to visit existing communities, which have been established with the idea of providing a viable alternative to the present consumer society, with a view to perhaps joining one. We have our own tents etc and could be self-sufficient during the time we spend with you and would be prepared to help with the work.

We have holidays due in September and are thinking of making a trip then, or perhaps over the Christmas school holidays, depending on the replies we receive.

If you can help, please write: Leigh and Christabel Gollop, 20 Power Street, Mount Gambier, SA, 5290.

We are three simple people, presently living on a small rented farm. We have two Clydesdale horses (Bess & Ben), two Nubian does, one black Jersey cow, assorted ducks and one friendly, old German Shepherd dog. We are interested in buying land for co-operative subsistence farming — aiming at existing closely and harmoniously with the rhythms of nature.

We'd like to hear from any co-op, or intended co-op, being formed in E-N-E Victoria to N-E NSW, and possibly Sth Queensland too. We like mountains and rivers and valleys, but it's healthy to have access to the sea too. We have learnt some rural skills and crafts and feel equipped to approach E.G. type living.

Hoping to hear from all you country folks. Love, Dave, Greg & Sonny, The Pines Farm, Batesleigh Road, Selby, Victoria, 3159.

PS. For cheap, healthy transport we have two horse-drawn waggons.

CRAFT SHOP

Craft and art supply shop for sale at Emu Park, on the Capricorn Coast in central Queensland (30 miles from Rockhampton). The shop has been operating for 2½ years and we are well established. We are at the moment negotiating to purchase 300 acres of land in northern NSW, and this is the reason we are wanting to sell.

The price we are asking is \$6000, which includes about \$5000 stock. All enquiries to "Sandalwood", Seaside Plaza, Emu Park, Qld, 4703 — John & Anne Pettit.



I would like to sell my beautiful property in the valley beside Mount Warning, seven miles from Murwillumbah. It's 32.14 hectares (80 acres), with a 25ft deep lake covering over 3 acres with two islands full of bird life, natural streams, pure and sweet to drink and ¼ mile of the South Arm of the Tweed River running along the eastern boundary.

It has a large corral and loading ramp, dip yard and holding yard, a two bedroom house, timber stained, with 15 x 33ft living area, pressure water supply, verandahs and all furniture is included.

We are selling to return to the USA and have already turned down offers which would destroy the land. We are asking \$60,000 and will consider terms. Property is freehold with rates of \$130.00.

Sincerely, Joy & Floyd Lombardi, Laurel Park, Mt Warning, Murwillumbah, NSW, 2484. Phone: (066) 79 5105.

I have an exceptional property to sell. It has two ancient Aboriginal paintings by a now-vanished tribe, so the place must go to people who will regard these. The roomy, rustic house is set near them and has a cookout, suitable for a communal or private kitchen. There is 75 acres of lightly timbered bush bordering on a small creek. There is a neighbouring alternative community which has a small wholefoods buy or barter store within walking distance. I'm asking \$15,000, which includes milking goats, muscovy ducks and newly established tropical fruit trees. I need to take my children to live closer to my family. Will consider swapping properties.

Write: Jeannie MacGregor, PO Box 89, Herberton, North Qld, 4872.

Would like to buy some freehold land, no matter how neglected, with or without barn, shed, shack or house, where we can grow a few pineapples, pawpaws, bananas, a mango tree, avocado, citrus, etc, and a few vegies. If it's close to the sea, or has its own water supply, so much the better.

Write: E. Stringer, Goldie Street, Wynyard, Tasmania, 7325.

We have a small paddock of land that fronts a permanent creek with a good 5 acres of soil for irrigation and cultivation. It's in the Central Tablelands (therefore the climatic conditions will be understood).

Is there anyone in the retiring age interested in a permanent caretaking capacity? A small dwelling would be big enough for a couple.

For further information, contact Dick & Gladys Thies, 1A King Road, Hornsby, NSW, 2077.

We have for sale for \$650, a 2½-acre freehold block at Milton, 8 miles north-west of Goombungee, near Toowoomba, Queensland. On map, Parish of Milton, County of Aubigny — portion 279.

The land is fully fenced, has one small dam, two overgrown antbed tennis courts and many nice trees. The surrounding area is farmland and the block has a road frontage.

Yours sincerely, B. Ullrich & W. Ford, 11 Wallace Street, Toowoomba, Qld, 4350.

We are a Gurdjieff group of about 20 people, interested in leasing or buying 5-20 acres within 80 miles of Melbourne in any direction. Some existing building preferred, though not essential. We need water and the land should not be too near major roads. We are interested in a harmonious way of life and are ecology-conscious.

J. Bruell, 2/28 Armadale Street, Armadale, Victoria, 3143. Phone: 509 5184.

We would like to sell our mini-farm of 1½ acres near Kendall, north of Taree and handy to the coast. Electricity and phone are available. There is a permanent, unpolluted creek. We will sell for \$5000 and could provide vendor finance.

Write: Jim Lanham, Pacific Palms, NSW, 2428. Phone (049) 97 6145.

I am 30 and a bi-national French/Australian artist. Peace, painting and sculpture in the country could be just terrific, but I have no money saved up for the average \$4000 share. Maybe I will find through this land line, others who are sympathetic with this rather common dilemma?

For a farm or village life with other similar loving, peaceful creatures and aware folk, I offer myself and all the talents I have acquired through travel here and overseas — organic farming, pottery, some leatherwork, vegetable gardening, typing, efficient organisation (if needed). A vegetarian, I also practice yoga and would love to hear from young people interested in accepting a fellow human within their own group situation.

Please write to me: Michel Marian Cruze, C/- Chenrezig Institute, Queensland, 44554.

If every two weeks two people would like to drop in and help with getting a halfway hacienda going, much appreciated. Orchards and reforestation part of the agenda.

Robert (Col) Kolominskos, Kalang Road, Bellingen, NSW, 2454.

We are three individual couples with a total of four children. We have 1500 acres on Little Run Creek, bounded by rainforest. Every plot we can sell will have its own total privacy in the winding creek. Helpful and friendly neighbours, hoping to start a school in the near future. So far one couple are breeding fish, the others pigs. Land sizes can vary with your requirements, ranging from 15 to 200 acres, ranging around \$5000 to \$12,000 for an extra large site.

Call in or write: Richard Friar, End of Little Run, Wingham, via Wherrol Flat, NSW, 2429, or Phone: Sydney 92 5450.

We have to sell our two beautiful 50-acre adjoining plots, 30 miles west of Launceston, Tasmania, just below the Great Tier. Each plot is about half forested with 60-year-old eucalypts. A creek borders them and a second creek (perfectly pure) runs through one.

There is a cabin on each plot — an octagonal stone house in the woods on one, and a 24 foot dome on the other, both built by the community which used to live there. Lovely view of the surrounding mountains.

Both plots have good gardens and fenced paddock areas. A dam has been built giving ¼-acre pond for great swimming and irrigation. No electricity; frost in winter. Will sell both plots together for \$14,000, or separately for \$7,500 each. Seeking buyer who will preserve the trees.

Write: Bob and Deborah Lawler, 12 Martin Place, Launceston, Tasmania, 7250.

I require a small block of fertile land, preferably attractive country in NSW or Queensland, not too close to the cities. I would like to buy about two acres, depending on the price, and it would be very suitable with an old house on it. At present I have \$2400 and I am still working, but I mean to leave city life as soon as possible.

Colin Papworth, 15 Ludlow Street, Hamilton, Qld, 4007.

For lease at low rental: fibro cottage and 5-10 acres of cleared fertile river flats at Pumpkin Point on the Hawkesbury River. Access is by boat only, either from Spencer or Brookly, both about 5 miles away. The cottage has two bedrooms and is equipped with porta-gas stove and hot water and fireplace and is in need of some repairs (mainly windows).

Please phone or write Denis & Janet Taylor, 6/4 Bennet Street, Bondi, NSW, 2026. Phone (02) 389 7075.

Stonefruit

*The Nectaren, and curious Peach,
Into my hands themselves do reach.*

ANDREW MARVELL, *The Garden*, first published 1681.

Deciduous stonefruit, or drupes, are the fruits of summer — luscious and juicy straight from the tree on a hot, thirsty day.

They include apricot, cherries, nectarines, peaches and plums. Of these most apricots and peaches are self-pollinating, but almonds, cherries and Japanese and European plums need cross-pollination before they will set fruit.

Cross-pollination is ensured by planting two varieties which bloom more or less at the same time. Ask your nurseryman for advice on this.

Stonefruit will grow in most temperate areas of Australia with a fair rainfall, though each type has its own climatic requirements. They are mostly hardy trees and bear fruit within three years.

In propagating, plums are best grafted while apricots and peaches are usually budded. See EG12 for details. Mostly, stone fruit is purchased as one-year, or three-year stock. They are planted out in winter when they are leafless, about nine to 15 feet apart in the home garden, more in the orchard to allow for machinery.

Trees should be lightly pruned after planting. Of course, bees will help to ensure that pollination of single trees takes place and beehives are a great asset in any fruit garden.

NECTARINE & PEACH (*Prunus persica*)

Old form: Nectaren, Pêche

Deciduous — reaches 12 to 20 feet high

Twice during the 7th century, caravan trains set out along the road from Samarkand to China bearing yellow peaches and peach trees destined as tribute to the Tang Emperors.

The Chinese revered these “golden peaches of Samarkand” as a symbol of immortality. They planted the trees and used peach petals to scent their baths.

The mouth-watering peach is thought to be native to Persia and possibly southern China. The nectarine is a smooth-skinned variety of peach — the two have even grown on the same tree.

Migrating to the west by way of the Middle East, the peach was probably introduced to Europe by the Romans. Writing in 1237, the chronicler Roger of Wendover claimed that King John (who signed the Magna Carta) died of a surfeit of peaches and ale in 1216. Peaches would have been a great rarity in Britain then.

It is thought that grafts of peaches and apricots were first brought into England by Wolf, one of King Henry VIII's gardeners, from France in 1524.

By the 16th century, there were already a great many kinds of peaches. John Gerard in *The Herbal* (1597) named the white, red and yellow, adding: “I have them all in my garden, with many other sorts.” A *Catalogue of Fruits*, published by the Royal



Horticultural Society in London in 1831, listed 140 varieties.

In North America, peach pie was as popular in colonial days as apple pie is now. So many peach trees were planted by the settlers that they escaped and quickly became naturalised.

Both peaches and nectarines were brought to Australia in the early years of settlement. The *Sydney Gazette* of June 19, 1808, recorded: “Six half grown peaches are at present to be seen on a tree belonging to George Gray on the Rocks.” The next year, William Furber of Kissing Point was offering three-year-old peach trees for sale at 2/6 each.

The main varieties of peaches are white-fleshed freestone, yellow-fleshed cling and freestone and yellow canning clingstones. They are all self-fertile except for one type, *J. H. Hale*, which needs pollination by other kinds which blossom at the same time, such as *Blackburn* or *Halehaven*.

Freestones are, of course, those varieties in which the flesh easily separates from the stone or pit and clingstones those in which the flesh sticks to the stone.

Peaches and nectarines are beautiful trees, a joy for the gardener, with their lush green foliage, brilliant pink-red blossoms and large colourful and fragrant fruit. A characteristic of the fruit is the scarlet "blush" which usually covers one side.

Peaches are hardy and will do well in most parts of Australia which are cool enough in winter to give them sufficient chilling — roughly 850 hours when the temperature is 7°C or below. This "rest period" seems to be essential to most types of peach and makes it difficult to grow them in warmer coastal and tropical areas.

One type which does not seem to need chilling but only defoliation to set fruit is *Watts Early*. This is worth trying in Queensland and Western Australia and the NSW coastline above Newcastle. Inland, peaches do well with irrigation (trickle irrigation is useful) and most canning types are grown in the Murrumbidgee Irrigation area.

They will tolerate most soils which are well drained, preferring a light sandy or gravel loam. Good drainage is essential to a depth of at least two metres. In siting an orchard, choose a slope facing north, well sheltered from wind and above the spring frost level.

Peaches will bear fruit in three-to-five years, give good yields up to 10 years, then production will drop off as they decline from 20 years onwards. Commercially, trees are replaced every five years. Nectarines are rather slower to bear and grow into a larger bush. They have their individual features, but may be treated exactly the same as peaches.

The trees grow and bear in summer and should be regularly watered, kept clear of weeds and mulched to conserve moisture. Seaweed mulch is good, also wood ash. Nitrogen may be fed in the form of animal manures. Potash and lime are also needed. If there is a magnesium deficiency, spray with a solution of Epsom Salts.

Propagation is usually by budding on peach stock. Plant out one-year-old budded stock, three to five feet tall, and prune back at the top. Regular pruning of peach trees is fairly severe, to stimulate shoot growth as crops are borne on one year wood.

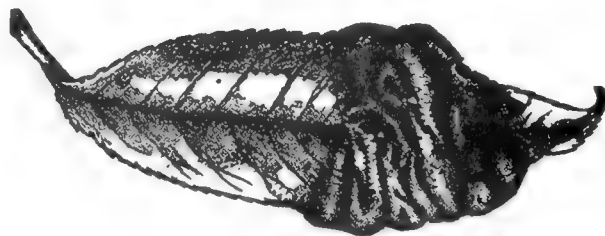
Over-bearing is a problem and drastic thinning is the solution. It's best to thin out the fruit by hand three times, starting when they are tiny, eventually leaving one good-sized peach or nectarine to every 10 or 12 inches. The lazy way to thin out is to jar the tree branches with a rod topped with a rubber or plastic hosepipe. Mechanical tree shakers are used in commercial canning fruit growing.

In Europe, peaches are usually fan-trained and grown against sunny walls, or grown under glass. These methods would apply to the cooler parts of Australia. In choosing varieties to grow, you should select those which range from early to late bearers, to get a succession of fruit. This depends, of course, on how much space you have available for fruit trees.

In the orchard, trees are spaced 18 to 20 feet apart; in the home garden they may be 12 feet apart, or closer if they are "headed" regularly. Yield from a mature tree is about 20 to 30lb of fruit.

As far as pests go, you could easily compile a catalogue of those which affect peaches. The most

dreaded are curly leaf, fruit fly and aphids. Many herbicides and sprays will harm peach trees, so organic methods are doubly recommended.



Curly leaf is a fungus spore which causes peach leaves to thicken, wrinkle and lose colour. It is most troublesome in wet springs. It may affect isolated groups of leaves, or the whole tree, causing leaf and fruit fall.

The curled leaves should be removed and the tree sprayed with a dormant oil spray. If curly leaf persists, spray with Bordeaux mixture — before spring growth and after the blossoms have fallen — to kill the spores. Feed with nitrogen, such as blood and bone.

Organic gardeners report success against curly leaf by planting garlic at the base of trees, or spraying with garlic spray, which also deters brown rot and peach aphids. A lot more research is needed before this can be claimed as a "cure". Of course the object of organic growing is to ensure a healthy tree, resistant to insect pests and diseases.

A mulch of wood ash and burying lemon peel in the soil around the tree seems to be effective against peach aphids.

Peach trees should be pruned lightly in the first two years to shape the tree, cutting back to three or four branches. Mature trees are pruned heavily, as mentioned before, to renew fruit-bearing wood. Old trees may be renovated by cutting well back to encourage new growth.

Yellow peaches are rich in vitamin A and retain about half the amount when cooked, preserved or frozen.

Peaches are ready to pick when the flesh gives way to a light pressure of the thumb. Pick carefully, holding by the base of the fruit and pulling gently.

The best way to eat peaches and nectarines are whole and fresh from the tree. Tree-ripened fruit are not as acid as stored fruit — more tasty and juicy also. Cut up damaged fruit and add the pieces to fruit salad and dry or bottle excess crops.

The table of peach and nectarine varieties given is a very small selection of the many kinds available. Be guided by your nurseryman on which types best suit your area.

Peach kernels are edible, tasting rather like almonds. Its oil is used in soaps as a substitute for almond oil.

To freeze peaches: Rub off skin, stone and slice. Cook with a syrup of 14oz sugar to one pint water. Pack in container to one inch from the top and refrigerate.

TABLE OF SELECTED PEACH VARIETIES

VARIETY	FRUIT CHARACTERISTICS	TREE CHARACTERISTICS	MATURES *	REMARKS
Fragar	Originated at Bathurst, NSW. Medium to large fruit, creamy skin with bright red blush, firm flesh. Clingstone.	Hardy, medium growth.	Late January.	Needs only moderate chilling. Does well in Sydney.
J. H. Hale	Large, yellow fleshed fruit, Red blush. Freestone. Sweet.	Small tree. Self-sterile and needs pollination	February.	Suits cool areas, inland. Needs 850 hours chill.
Blackburn	Elberta derivation. Medium fruit, deep yellow skin, red blush. Freestone.	Strong, vigorous, dark green foliage.	January.	Ideal dessert peach. Low chilling need.
Watts Early	Originated at Carlingford, NSW. Small to medium fruit, highly coloured. Freestone.	Light green foliage, shorter life than other peaches.	Late November — the earliest peach.	Prune and thin heavily. Needs little chilling.
Halehaven	Medium-large fruit, round, deep yellow, red blush. Yellow flesh. Freestone.	Vigorous growth. Reliable.	Ripens December.	Needs 850 hours chill.
Lippiat's Late Red	White-fleshed clingstone, good colour.	Heavy bearer.	Jan-Feb.	Also known as Sydney White Cling.
Pullars Cling	Originated at Ardmona, Victoria. Large, yellow flesh, large red clingstone.	Vigorous upright grower. Regular, heavy bearer.	Feb-March.	Good bottler.
Elberta	Large yellow fruit, bright blush, strong flavour. The most famous peach.	Upright, vigorous, bears well.	Feb-March.	Needs 850 hours chilling. Suits coastal areas. Good drying.
Golden Queen	Deep, golden flesh, popular as canning peach in MIA. Clingstone. Good flavour.	Consistent heavy crops.	Feb-March.	Bottling.
Goldmine	NECTARINES Most widely grown nectarine. Fruit medium size, bright orange-red skin, creamy flesh. Sweet flavour. Freestone.	Prolific bearer, handle fruit carefully.	January.	Suffers from brown rot.
Cardinal	Bright, red-skinned, white flesh. Freestone.	Prolific bearer. Hardy.	Dec-Jan.	—
Early Rivers	Very large, shiny red skin, crimson blush, greenish yellow flesh. Juicy. Freestone.	Heavy cropper, moderate growth. Hardy.	Dec-Jan.	—
Nectarads	Yellow-fleshed nectarines. Nos 2, 4 and 7 have done well in trials at Bathurst Ag Station, NSW. Smooth red skin.	Upright, vigorous.	Mature in order of numbering.	

* Maturing dates given are for NSW around Sydney.



APRICOT (*Prunus armeniaca*)
 Old form: Abrecocke, aprecock, apricock
 Deciduous

Apricots, fresh and dried, are a staple food of the Hunzas, who have been growing them for 1600 years on the steep terraces of their isolated mountain home, 7000 feet up in the Himalayas near Gilgit in Kashmir.

The Hunzas are famed for their long life, health and vigour. Sir Robert McCarrison, a former medical officer of the Gilgit Agency, commented on their physique and endurance and noticed a complete absence of abdominal illnesses.

They eat the fruit with bread and crack open the apricot stones to eat the kernels. Several strains of apricot have been developed in Hunza, most of them bearing bigger fruit than in the western cultivated types.

A unique custom is that apricot orchards are inherited by Hunza women, independently of husbands or brothers and regardless of who owns the land.

Formerly apricots were believed to be native to Armenia, which gave rise to the Latin name. It is thought now that they originated in north China, the Himalayas around Hunza and, possibly, the Caucasus.

They reached Europe by way of western Asia in the time of Alexander the Great and were introduced into Britain from Italy by Henry VIII's gardener Wolf.

The herbalist William Turner mentioned "apricocks" in his *Names of Herbs* (1548), remarking: "We have very fewe of these trees as yet," and in his *A new Herball* (1551, saying: "I have sene many trees of thys kinde in Almany and som in England."

The English name, apricot, developed from the Roman *proecox*, meaning early, because it ripens early in summer, a week or two before peaches or plums.

Apricot kernels are eaten in Egypt and Syria, where they are made into a paste. The kernel oil is often substituted for almond oil in perfumes, flavouring and facial creams.

The fruit is rich in vitamin A, has a fair amount of B vitamins, some calcium and iron. These nutrients are more concentrated in dried fruit.

Apricots are related to peaches, which they resemble in form and colour, though the large pit or stone is more like that of the plum. Like peaches, they require a certain amount of winter chilling during the dormant period.

They are cultivated in much the same way as peaches, though they are more sensitive to cold and extremes of heat. They are nearly all self-fertile, so it is not necessary to plant two trees to produce fruit. They take up more room than peaches, spreading out to a 25 foot circle and live longer than peaches — some trees have been known to survive 100 years.

One tree in good condition will give you 200lb of fruit. About five pounds of fresh apricots will yield one pound of dried fruit.

Like peaches again, apricots need very good drainage and fruit must be thinned out vigorously. Plant trees away from the vegetable garden as they are damaged by "blackheart" caused by wilt harboured by strawberries, tomatoes and potatoes.

Commercially dried apricots are usually fumed in sulphur before being dried in the sun for two to four days. Canned apricots are put up in heavy sugar syrup, due to the acidity of the fruit.

Apricots are pretty trees, especially when in blossom. They are good subjects for terracing on steep hillsides and should be planted 25 to 30 feet apart in the orchard. In the fruit garden, if space is a problem, a solution is the "family" or "three-in-one" tree, which carries apricots, peaches and plums, or other combinations of fruit.

Pruning is carried out in the first two years to produce a frame or "scaffold" of two or three strong branches to carry fruit. This is because the mature wood of the apricot is stiff and rather brittle.

Fruit is borne on one year old wood like the peach, but also on spurs two years or more old. When mature, at about eight years, apricot trees need only a regular "tidying up" each year. Some varieties which bear heavily every second year should be pruned heavily in the winter before the big crop is expected.

Some Varieties

Early Moorpark: Medium sized, golden fruit with red cheek, rich flavour, maturing in mid-December.

Moorpark: Bears three weeks after the early variety, soft delicious golden fruit with red blush. Heavy bearer.

Newcastle: Early, ripening late November, medium sized fruit, coarse texture, red-cheeked, good flavour. Heavy crop.

Oullin's Early Peach: Early, medium, roundish golden fruit, sweetest when fully ripe. Good dessert fruit. Heavy bearer.

Trevatt: Ripens late December. Large fruit with good quality and flavour ideal for canning and drying. Heavy bearer.

Glengarry: Very early, ripening in mid-November and suitable for hot areas. Medium sized fruit, nice flavour.

SUN-DRIED APRICOTS

Leave fruit on the tree until fully ripe, but still firm. Split the fruit in two and remove stones.

Lay the halves on trays in a single layer, with the cut side upwards, exposed to the sun. Leave in sunlight for two or three days until the cut side is well healed. Take in at night if cool. Stack trays in a well-ventilated shed to complete the drying.

APRICOT JAM

Wash 3lb of ripe apricots, halve and stone the fruit (but don't peel). Put it into a pan with enough water to cover and three teaspoons of lemon juice.

Break open a few stones, remove the kernels and blanch them by dipping in boiling water. Cut and add to fruit.

Cover and simmer gently for about 20 minutes, or until the fruit is tender. Add 3lb sugar and stir with wooden spoon over low heat until dissolved. Then bring to the boil until the jam sets, reaching the consistency of jelly.

Pour into jars and seal with a layer of wax. Yields about 5lb jam.

Our fruit garden

By MAGGY RAGLESS

The small piece of land of about $\frac{3}{4}$ -acre on which we live has been in our family for 99 years — having been reduced to this small plot from an 80-acre section that my grandfather inherited about 1900.

In the name of "progress" during the last 25 years, the greater part of it has come under tar and cement, making us the intruders in a "light industrial area".

Originally there were vineyards from which, in later years, most of the crop was sold to Italian and Greek home wine makers. There were also almond plantations and a machine that my father invented and developed for cracking almonds and apricot stones commercially (starting in the 1920's). A small creek running through the property was used for irrigation during winter.

There was also an old fruit garden started by the family before us in about 1865, to which we added, along the creek flats, about three acres to give a continual year-round supply of fruit. We hung on to the fruit garden and sheds till about 1969, when it was sold, but we were still able to work the area until 1971-2, when, finally, we had three months notice to clear the area of all we wanted. This was a lot — 70 years' worth — many problems, much hard work that was rather soul-destroying and what a mess in the end!

During that time we got into the habit of preserving as much as we could, not quite knowing when the final blow would come, while we also started to establish fruit trees around the garden close to the house.

Now we have much the same variety of fruit, but in much smaller quantities, except for figs and oranges — we just ran out of room.

We preserve, freeze, dry and crystallize and harvest. Any surplus we send to country cousins in the more arid areas of the State, where fresh fruit is greatly appreciated. This system worked well until this year, when the dreaded fruit fly, which was unknown in South Australia, was found in some street-houses not far away.

The area for a mile around was put under quarantine for two or three months. A team of men from the Agricultural Department came around several times a week to spray and set baits. The procedure was closely supervised by a foreman of the Department. Nothing was allowed to leave the property

unprocessed. Grapes from our small vineyard, which produced about 1 $\frac{3}{4}$ tons of wine grapes, were sold under permit.

Being a dry year, there wasn't a particularly good crop anyway, so we were able to juice and freeze 40 odd square margarine containers of muscatel and dipped and dried sultanas and raisins.

RAISINS

Our dipping recipe:

7ozs caustic soda

8 gallons boiling rainwater

1 tablespoon olive oil.

Boil continuously and dip grapes in a wire basket to the count of three for sultanas and five for raisins. Lay to dry on $\frac{1}{2}$ -inch or smaller wire netting racks mounted on trestles or boxes in the sun, taking inside each night for about a week, or sorting out until dry.

Spare minutes at meal-times in between courses and afterwards are spent stemming the fruit. This is most tedious, but necessary if you wish to use the fruit for cooking. We have found the Old Agee jars or similar tin-topped lid jars to be the best.

To keep worms out of dried fruit or cracked nuts:

Heat fruit on brown paper and jar and lid in oven until very hot — after a meal is an ideal time. Then pack the fruit into the jar and screw down the lid while all three are hot.

If the lid has a seal in it, that makes it all the better, as this melts a little. Inspect jars every month or so, if it lasts that long. Repeat the process if necessary if there are any worms. Wash fruit or nuts before using.

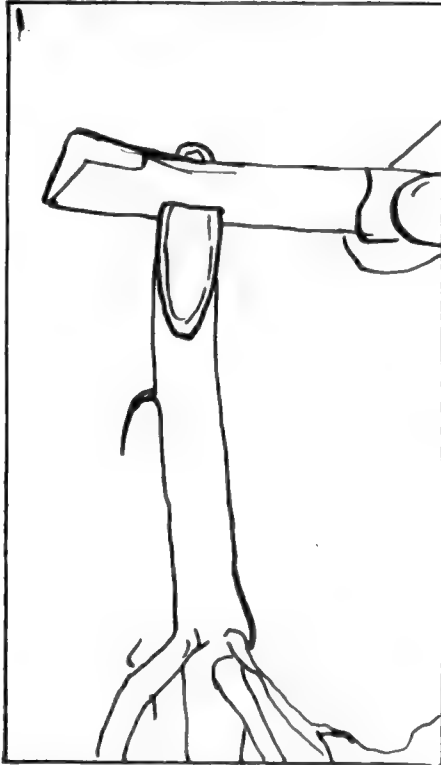
We keep the jars of fruit in an old meat safe and this, I think, has helped to keep the moths away from laying eggs around or on the jars.

Besides stemming the raisins, we will probably also have to store some. This can be done by putting them in hot water and squeezing them out, but then you have to wait for them to dry thoroughly, as you can't put wet fruit in a cake. We have a gadget of my grandmother's called a Raisin Seeder, which does the job really well, however, the rubber has badly perished.

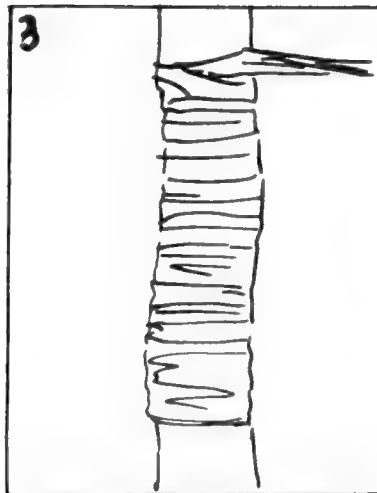
Does anyone know if and where, a new rubber could be obtained, or if one could be made?

All the best of rain and shine, Maggy Ragless, "Wattiparinga", 1 Selgar Avenue, Clovelly Park, SA, 5042.

GRAFTING Whip + Tongue Graft

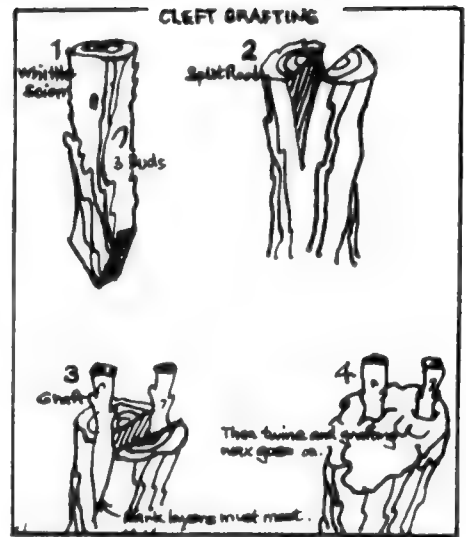


Stock cut and start of back cut



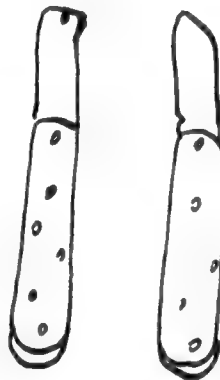
Raffia Tie - then sealed with wax

*No further
Sealing
required for
waxed cloth
or plastic strip.



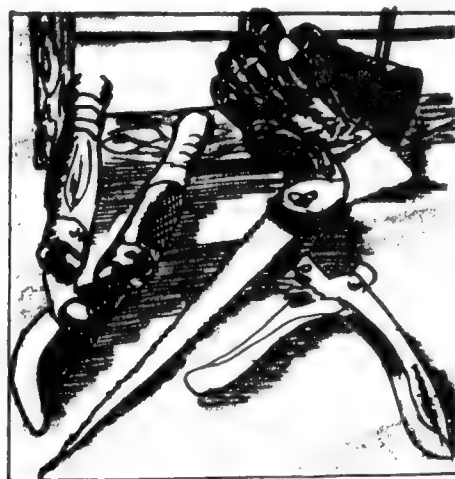
grafting

DRAWINGS BY CHRIS BARRY

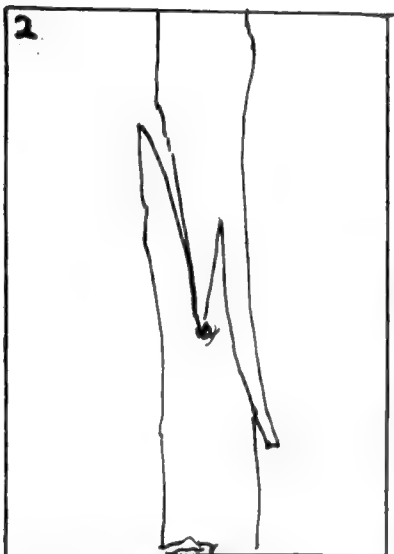


Grafting Knives

A few of the 'tools of the trade' - lopping shears, a good sharp tree saw, secateurs

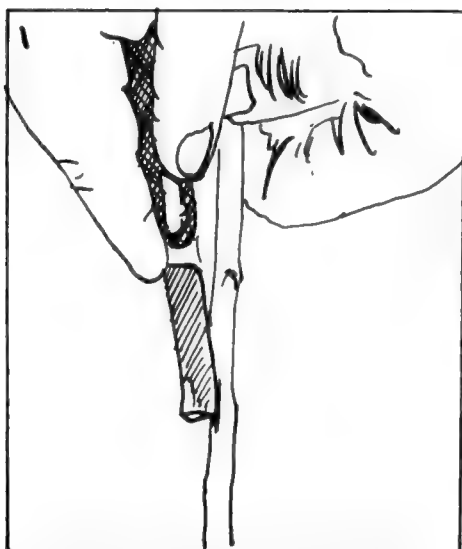


Wrapping trunks of young fruit or nut trees to protect from sunscald, with used aluminium foil / heavy paper or fabric, newspaper. Don't restrict growth by tying too tight. Also try whitewash

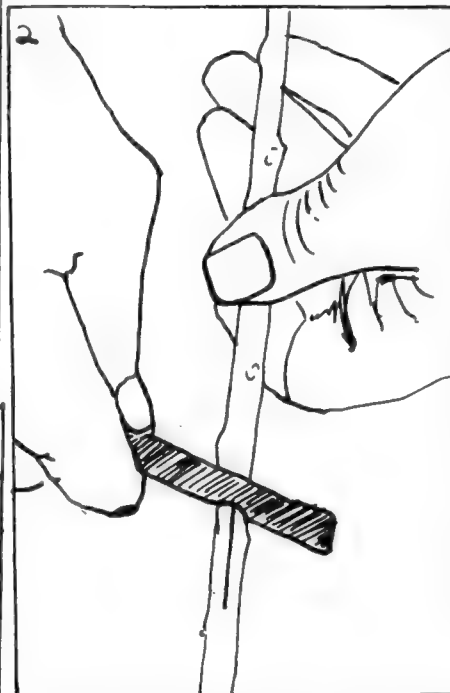


The scion prepared in a similar way + the cut surfaces of stock & scion fitted together.

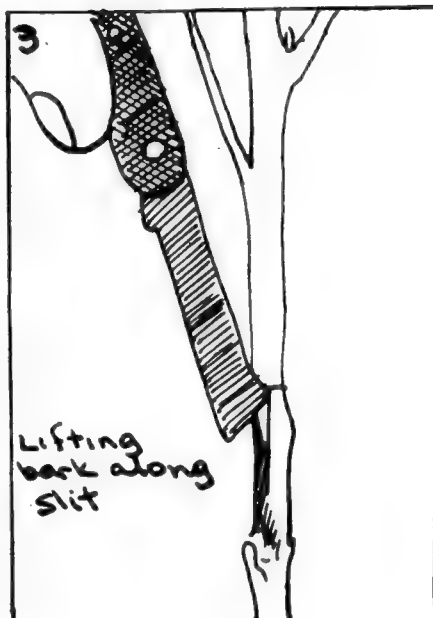
budding



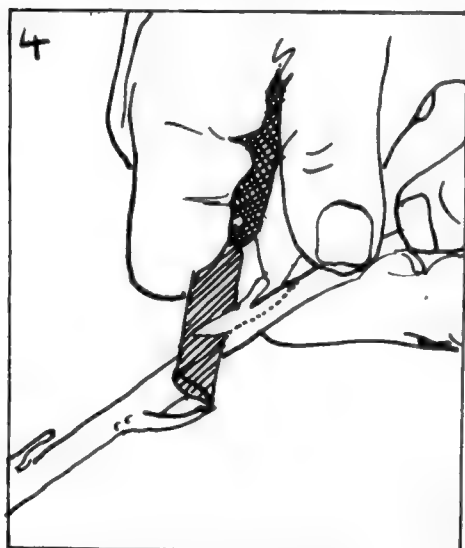
Start of vertical cut on stock.



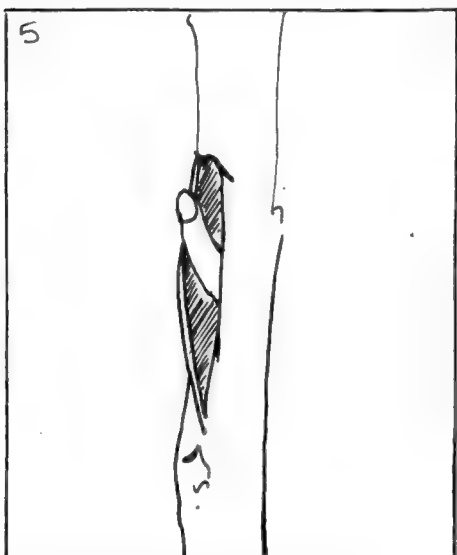
The horizontal cut at upper end of the vertical cut on stock.



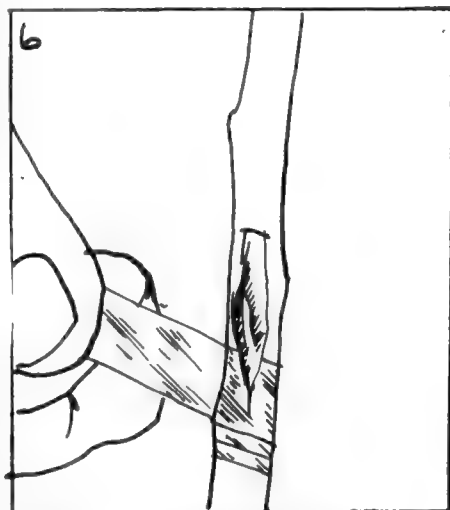
Lifting bark along slit



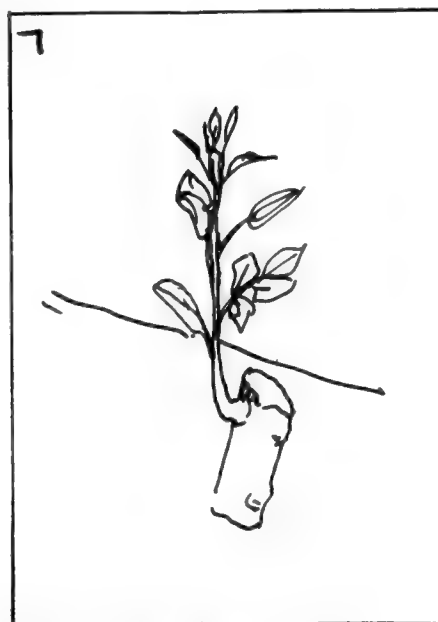
Cutting of bud from scion



Bud inserted at top of T-cut ready for tying.



Tying up - using plastic strip.



Grows - the shoot growing from the inserted bud after the stock has been cut back. Other sucker shoots have been removed off.

... adapted from
"Propagating Fruit Trees"
New Dept. Ag.



By ROBERT HEIM

Here at Miehrac Farm, Lancefield, Victoria, we are completing our first 12 months of experimental planting of nut trees. As the past winter was rather mild and dry, we will continue to test nut types and varieties for a further year.

The Almonds — *Hatche's Nonpareil* and *Johnson's Prolific* — after a slow start, have settled in very well. The differences in growth seem to be determined by position of planting, not variety. Originally we did not intend to plant almonds, but followed the advice of our nursery.

We have purchased all our stock from John Brunning and Sons, Somerville, Victoria. They have been supplying fruit trees to orchardists around the world for over 100 years. Their experience and local knowledge of Australian orchard areas makes planning a lot easier and cheaper, with fewer mistakes.

Cobbs Red Skin and *Wanliss Pride* hazelnuts (filberts) have been planted to form a northern windbreak. Unfortunately the dry winter and summer have held these back. The final blow was the annual locust plague.

Obviously the hazelnut and walnut leaves must be tasty, along with our *Nottingham medlar*, as the locusts had a field day devouring them. This setback, so early in their growth, was more than we could stand.

Our solution to this unprovoked attack was to tailor-make mosquito netting "coats" for each tree, stitching the netting together with string and firmly tying top and bottom. We have already noticed new growth and will remove the coats before winter.

The pecan nuts — *Success* and *Williamson* from Queensland — were our first failure. Unlike the other trees, they require dampness around their trunks. We should have covered them with compost up to the bottom branches before planting. Once planted, they are best protected by a layer of plastic-based paint, the type that washes off your brush with water. This was an expensive error on our part and we hope to rectify it this winter.

As we originally wanted to plant our main orchard in walnuts, we were very disappointed in not being able to buy grafted trees. We spoke to nurseries all over Victoria and South Australia without success. It appears that no one is prepared to take the time and effort needed to propagate and graft walnuts.

However, we hope to have walnut trees to plant by 1978. We did plant some English walnut seedlings in the winter of 1976. They are rather beautiful and we hope to use scions from them for grafting.

The past year was busy, with mulching, pruning and weekly watering from our bore reserves. Pump failures, locusts, high winds and storms all added to our "wealth" of experience.

No matter how much you read and study, or ask advice, it all comes back to your own experience — so get up and start planting.

Walnut Island

nestled in the "Breakway Valley" on the Goulburn River near Alexandra, Victoria, *Walnut Island* is Australia's largest plantation of American black walnuts.

The 125 acre site was first planted with 6000 seedlings in 1969, from imported seed. Further plantings of 13,000 trees in 1970 and 8000 in 1971, have completed the first stage of 92.5 acres.

This plantation is designed primarily for the production of logs for the veneer wood industry. By 1995 they are expected to reach a height of 25ft and a diameter of 25 inches at breast height.

Only a quarter of the original 24,000 trees will remain for this final harvesting. The original 260 trees per acre will be reduced to half by the age of seven years, with uncommercial thinning. In 1985 the trees should produce 65 logs per acre of 12ft by 16 inch diameter (breast height) for saleable thinning.

Over the 25 years the timber will accrue a value of \$38,500 per acre. Thus Walnut Island should give its investors a return in excess of \$3.5 million. The nut yield under these conditions, with heavy pruning and thinning, is very small and not economical.

Thus the manager, Neil Parkinson, is diversifying the property for other returns. Cattle agist between the rows of walnut trees. This reduces weed and grass growth. So far there has been no damage to the trees caused by the cattle.

Unplanted acres are being cultivated with broccoli, navy beans, potatoes and carrots. Neil has also built several motel-type cabins on the banks of the Goulburn River for trout fishing enthusiasts, which are available at \$7.00 a night.

That is Walnut Island's history and potential in a nutshell. The reality is somewhat different, but we can all learn from this ambitious plan.

The trees have *not* been thinned by half, due to haphazard growth and constant damage by the southerly wind to the all-important crowns. The American black walnut, in its formative years, is a thin, somewhat fragile tree, which grows in height fairly quickly, by North American hardwood standards. The maturing years are important for diameter growth, which gives the tree financial value.

The bitter-sweet meat of the black walnut has not been exploited by confectionery or mass food production companies in Australia. Their resale value compared to English walnuts is only marginal, if you can find a buyer.

For the average smallholding, the grafting of English scions to American black walnut seedling rootstock would be ideal. A programme of pruning and thinning, properly set out, would produce good annual crops after three to five years and prime log timber over 15 to 20 years.

Part of Walnut Island's plantation of American Black Walnuts is shown on the page at left. Photo: Robert Heim.

In a nutshell

MACADAMIAS



Macadamia nuts in Hawaii.

By BOB MAGNUS

There are three distinct types of Macadamia nuts native to eastern Australian rainforests — *Macadamia tetraphylla*, *Macadamia integrifolia* and *Macadamia prealta*.

The last is not eaten by humans, does not appear to have any commercial value and will not be considered here.

Macadamia tetraphylla is native to NSW coastal scrubs, has rough-shelled nuts and leaves usually slightly prickly on the margins not unlike holly.

Macadamia integrifolia is native to rainforest areas in Queensland north of Brisbane. The nuts are smooth-shelled and not quite as sweet as *M. tetraphylla*. Leaves are smooth.

In the 1880s and 1890s Macadamia nuts of the *integrifolia* type were introduced into Hawaii. Subsequently, when the value of these nuts was realised, large plantings of seedling trees took place.

Later, after quite a bit of research, methods of grafting Macadamias were developed. Better type heavy bearing cultivars were selected and propagated and so an important industry developed in Hawaii — of an Australian native tree! Soon the Hawaiian selections

were, ironically enough, reintroduced to Australia and these have formed the beginnings of the Macadamia nut industry here.

On many farms in coastal NSW and Queensland one sees seedling trees. These usually start bearing after about 10 years and nuts are often small or have very thick shells. Yields are variable.

Grafted trees come into bearing much earlier — at four or five years. Nuts are of high quality and these trees are regular heavy bearers. So it's worth spending \$6.00 or so on a grafted tree.

Macadamias are native to subtropical high summer rainfall areas with acid soils which have a high humus content. They are more cold hardy than avocados, but not as tolerant as citrus. Macadamias appear to grow well in Mediterranean climate areas, with irrigation in summer months. However they should be protected against strong winds.

It appears that yields can be improved by interplanting two or more varieties and benefit by having bees in or near nut orchards. A mature grafted tree can be expected to yield 50kg of in-shell nuts at 10 years.

GRAFTING & PROPAGATION

Originally only seedlings were grown. Though air layering was possible, it was never adopted on a commercial scale.

About 35 years ago a Hawaiian research worker found that grafting wood from branches that had been ring-barked six weeks previously could readily be grafted on to seedling stocks. This is the way most trees have been produced.

However, at present in Australia interest is developing in embryo grafting: seeds are germinated in peat. When the nuts split open and the root and growing shoot appear these are cut off and a wedged scion is inserted directly into the cotyledons inside the nut.

"Takes" with this sort of grafting are at present not high, but a plantable tree is produced in a much shorter time. Also there is in South Africa a nurseryman apparently producing large quantities of cuttings, though opinion has it that cuttings and embryo grafted trees do not have as strong a root system as selections grafted on seedling stocks.

Macadamias flower in spring in beautiful drooping pannicles of tiny flowers. Nuts develop through the summer, then fall from the trees in autumn into winter.

The husks often have to be removed and nuts dried for a few months. Then they can be opened or cracked with a hammer as the shell is too hard for regular nut crackers.

In shell nuts are round, up to 2cm in diameter and number about 200 per kilogram. Processers and buyers are at present paying up to \$1.00 per kilo for the nuts.

FRUIT NURSERIES

John Brunning & Sons, Sommersville, Victoria, 3912. Reliable mail order supplier — send 50c postal note for descriptive Fruit Tree Catalogue.

Swane's Nursery, Galston Road, Dural, NSW, 2158. Send sae for list of fruit trees available.

TREE NETS

Fruit and nut tree nets are available by mail order from *H. Rehfish & Co Pty Ltd*, PO Box 29, Ballarat, Victoria, 3350. Suitable also for vines. Send sae when enquiring.

HERB NOTES



Ron and Joan Jones' German Shepherd, Rhani, peers between two clumps of lemon grass at Melody Farm Nursery.

By RON JONES
Melody Farm Nursery

LEMON GRASS (*Cymbopogon citratus*)

Although mostly known as "Malayan" lemon grass, this scented grass grows over most of the South Pacific region.

It grows well in the Sydney area, especially in those parts just above sea-level. At our farm in Dural it does exceptionally well, although we are 700 feet above sea-level.

Most folks use it to make lemon grass tea, by infusing the leaves after cutting into small pieces, or by pulling a couple of roots from a well-established plant, pummeling gently with a kitchen hammer to release the delightful lemon fragrance and steeping it in the cooking for the last five minutes.

It is a necessary ingredient of the popular Dutch-Indonesian dish, *Nasi Goreng*, and may also be used in curries, spicy mince, casseroles, soups and stews.

When making lemon grass tea it is pleasant to add one or two peppermint (*Mentha peperita*) leaves for a touch of added flavour. The tea may be consumed hot or iced.

When the Ord River Scheme in northern Australia was completed, the banks of most of the canals were sown with clumps of lemon grass to contain them in the wet season, but I found out only recently that it had all been blown away by cyclones in the last year or two.

I discovered this when a client called at our nursery and asked for a small well-established lemon grass plant to take to Darwin with him for his married daughter. When I remarked that was like taking "coals to Newcastle" he told me of the destruction of it at the Ord.

However, since then I've heard of a young man who has established 35 acres of lemon grass which he is growing commercially in the Ord area. He plans to remove the lemon oil, which is used in many products, such as hair spray, shampoo, toothpaste and detergents.

So if you have a spot in your garden for this rather picturesque clump of grass, I suggest you plant one, both for cooking and fragrance. It is shallow-rooted and can easily be dug out, so there is no danger of it interfering with other plants. It needs a sunny position, reasonable shelter and plenty of water.

PRICE LIST

Melody Farm Nursery's latest price list includes over 180 varieties of herb plants (not for sale by mail) and more than 80 varieties of herb seed (available by mail). Send sae for list to 616 Old Northern Road, Dural, NSW, 2158.

Nature Spirit Herbal Products

We wish to advise all earth people who grow their own herbs or have their own herb stocks that we can prepare their herbs into 1:1 fluid extracts and tinctures. We have a small factory here on our farm where we do the herbal preparations. This year we have started growing herbs on a large scale and hope soon to be able to offer herbal extracts and tinctures prepared from our own herbs.

Any queries, please write: Dave and Melanie Dane, Nature Spirit Herbal Products, PO Box 85, Byron Bay, NSW, 2481.

Lemon grass and comfrey

We have lots of lemon grass and comfrey (roots or dried and fresh leaves) for sale at reasonable prices.

Keryn Wilton and Brad Carter, 161 Queensborough Road, Karalee, Ipswich, Qld, 4305.

The Herb Society of South Australia meets on the first Monday of each month at the Box Factory, Regent Street, Adelaide. Annual fee is \$3.00, with a visitors fee of 50c per meeting.

The Queensland Herb Society meets on the first Monday of each month in the Theatre of the new Botanical Gardens complex at Mount Coot-tha, Brisbane. The Society publishes *Sage*, a regular newsletter full of interesting snippets on herb growing and use.

Subs are due on June 30 each year and are \$7.00 for city members, \$4.00 for country members, students and pensioners and \$10.00 for families. Send to: Valerie Nilsson, 137 Jerrang Street, Indooroopilly, Brisbane, Qld, 4068.

THE HERBARIUM

The Herbarium, quarterly, 72 pages, \$8.00 per year posted, from PO Box 20, Bundanoon, NSW, 2578.

The Herbarium is a charming new quarterly magazine for plant and herb lovers. One of its aims is to "widen knowledge of those oft-times overlooked plants and to show and discuss many of the rarer plants of this kind which are not normally seen in nurseries or collections."

The first issue has been lovingly put together by Deborah and John Barnes and includes delightful illustrations of herbs and plants from various periods. It must be one of the best first issues of a magazine we've seen.

Articles include a small history of herbalism, the foxglove, discussion of vexed questions like the identity of tarragon and valerian, plant dyeing, with a list of dye plants and the colours they produce, beer and hop recipes, quinces and medlars, the paeony old roses, fruit jellies, a nice expose of medical quackery in Australia early this century and methods of extracting fragrance from plants.

In future issues there will be a buy, sell and barter information page for people seeking plants and seeds not normally available.



HOP ALE

Home made hop ale is a very simple process and keeps for a week or more.

10oz hops

½oz bruised ginger root

1½lb sugar

3 pints of water

Take 10z hops and bruised ginger and place in 3 pints of water, boil for 30 minutes. Add sugar and reboil until dissolved. Pour liquid into earthenware pan and stand overnight. Next day draw off gradually and bottle.

HOREHOUND BEER

1 handful of horehound

3 gallons of water

2lb treacle

2 tablespoons yeast.

DIRECTIONS: Put horehound and treacle in water, boil for 1 hour, strain and cool to temperature of milk. Add two tablespoons of yeast. Let stand 24 hours then bottle.

orchard herbs

By CLAIRE & BOB NISBET

Some herbs which help orchard production:

Lemon balm (*Melissa officinalis*) is a good herb to plant in the orchard. Bees come from miles around to gather pollen from its flowers and fertilise fruit trees, ensuring a heavy harvest.

Hyssop (*Hyssopus officinalis*) flowers also attract the bees. Its roots have been found to cleanse the soil and keep many soil pests at bay. Hyssop improves the yield from grapevines if planted nearby and the vines grow even better if allowed to ramble up a mulberry tree.

To repel the fruit moth from fruit trees, grow a tansy (*Tanacetum vulgare*) barricade around the orchard.

Plant a few nasturtiums around apple trees — they repel woolly aphis.

Ethylene gas is used extensively in artificial ripening of fruit. Nature can be put to work by growing a few dandelions (*Taraxacum officinale*) with fruit trees — the ethylene which they give off can aid in the early ripening of a crop if desired. Too many dandelions will inhibit growth.

Apple and pear trees will grow better under open cultivation. Root excretions of grass suppress root tip growth of these trees.

OLIVES THE QUICK WAY

By Diane Lebbling

We're in the midst of olives now. Don't seem to have any problems with pests.

The trees need to be pruned if you want large olives for pickling, but for oil the olives should be small, so don't prune the trees.

One of the locals has an old cold press and is keen to help us with the oil. The olives must be really ripe. We're going to harvest them as we saw it done in Spain — spread a tarp on the ground and knock the olives out by hitting the branches. You have to be careful not to damage the tree.

An Italian friend has shown me how to get olives ready for eating in three days — use green olives, just before they turn black. Bash them with a bottle on a piece of concrete to remove the "bones". Cover with almost boiling water, salted to taste (we used a handful for just about two quarts of olives and they were a bit salty). Leave to cool.

Then cover with rainwater and change this four times a day for three days. Press for a while (a morning) in a colander, then add a generous amount of dried oregano, chopped garlic and chopped chilli (if you can take it hot). Press again. Taste from time to time till they're all gone — they will keep a week perhaps, but *not* in the refrigerator.

The same method can be used for black olives, but don't try to remove the pips... prick with a fork, or slit four times. Done this way they don't really taste like olives, more like a pizza!



STUART, VIVIEN and BORONIA ELLIOTT

Our first child, Boronia Minnamurra, was born at home on a brilliant morning, five days before the Summer Solstice, in the Mount Lofty Ranges, with magpies and parrots welcoming her into this world.

Her birth was attended by an Adelaide GP and a friend who'd had four children by natural childbirth. She was pushed out in the squatting position, so rapidly and joyfully, after a very long labour through the cold night in front of the woodstove.

While the doctor slept in our guest room, Olwyn and I applied hot ginger compresses to Viv's lower back to ease the labour pains.

At four in the morning we agreed to let the doctor rupture the forewaters to hasten the delivery, and he manually rotated Boronia's head into the right (anterior) position during the next contraction. With the head fully in contact with the cervix at last, labour accelerated rapidly.

Strengthened by a bowl of hot miso soup, we entered transition very blissfully, and the final pushing stage was an amazing 10 minutes to the birth at four minutes to eight, at total labour time of about 37 hours — impossibly long for a hospital birth!

Boronia was placed straight onto Viv's belly. The cord was cut after pulsations ceased, and left untied on the material end at my insistence to hasten expulsion of the afterbirth, which came away soon afterwards and was later buried in the bush on our land.

I then gave Boronia a Leboyer bath, right on the bed, her mother watching as her eyes opened and she relaxed after the long struggle to be born. Boronia then suckled for over an hour, falling asleep in her mother's arms, all red and Oriental, a thick head of black hair: "The perfect one . . . the newborn child."

Alternative Birth

The whole experience of Boronia's homebirth was everything we'd hoped and planned for, totally positive and joyous, a spiritual highpoint of our marriage. How can we make this sort of birth experience the norm, rather than the exception?

Here in Adelaide, we've formed the *Homebirth Support Group*, originally an offshoot of *Childbirth Concerned*, a group campaigning to improve hospital deliveries. This is because we believe that no matter how progressive the hospitals become, they are still institutions, and historically birth belongs in the family home attended by kin, neighbours and local, often self-taught, midwives.

Traditionally a woman's province, obstetrics has been taken over by male specialists, who view birth less as a natural process than as a potentially pathological event requiring their active management:

"Many mothers consider that the usual course of spontaneous labour is normal parturition. Nature, however, is not always a reliable ally. Therefore, obstetricians concern themselves less with the average circumstances of labour and strive more to promote low risk (even minimal risk) situations for parturition."

(Article on "Controlled Parturition" in *British Journal of Hospital Medicine*, March, 1977, p237.)

With the increasing stress in modern obstetrics on sophisticated monitoring of foetus and mother, refined pain relief, hormonally augmented contractions, and routine induction of labour, the modern hospital birth is becoming totally unnatural and technological.

To the oft-repeated question, "How safe can homebirth be made?", one is tempted to retort, "How safe can hospital birth be?" — especially when recent study by the Childbirth Research Institute in America, using over 1000 homebirths as the *control* group, found in the hospital deliveries five times the home rate of foetal distress in heart rate; five times the elevated blood pressure in the mother; four times the meconium staining, 30 birth injuries in the hospital, specifically from forceps, but no injuries at home; Agpar scores much better at home; four times as much "neonatal resuscitation"; and so on!

For the mother and father who have no intention of fighting the system to get a natural (not to mention Leboyer) birth in hospital, home birth is the obvious choice.

How self-sufficient can a home birth be? Can we do without the support of the medical community — midwives, doctors and hospitals?

In our own case, we placed great faith in our natural diet, daily cycling and walking, and an immense amount of reading on obstetrics before the birth. But when it came down to imagining the baby dying through our incompetence, especially asphyxiating at birth, we

decided to have a doctor present to perform the technical skills while we concentrated on the emotional and spiritual feelings.

The experience of our Support Group illustrates the dilemma. There have been nine home births since January 1976 directly connected with the group.

The first two were attended by a couple skilled in herbal medicine. One was a first birth, and both were easy labours. The third baby was delivered by the father unassisted. The fourth was at least eight weeks premature and ended in hospital. The fifth and sixth were first births attended by a doctor, whose intervention in both cases was fairly critical — prolonged second stage in one and rupturing the membranes in ours.

This doctor then decided not to attend further first births until midwife and hospital support is improved. So our next first home birth was not attended medically despite exhaustive searches for a doctor or midwife. Fortunately the labour was very relaxed and normal, with about ten people helping.

We then held a large seminar at the Adelaide Childrens' Hospital on "Homebirth and the Medical Community", to encourage the professionals to support us, with speakers from the major maternity hospitals and the St John's Ambulance.

The highlight of the meeting from our viewpoint was a spirited attack on the present generation of doctors by an older colleague, who recalled his early home obstetrics experience. He asserted that practicing medicine in the home created good doctors better than in any other way.

As if directed by Fate, our next first birth ended up in ultra-modern Flinders Medical Centre, the labour failing to progress after 18 hours at home and blood pressure rising dangerously when the attending doctor and midwife decided upon hospitalisation.

The hospital staff were extremely helpful, as a direct result of the seminar, and even after an oxytocin drip and an epidural, labour ended successfully with a fully-conscious transition and pushing stage followed by a Leboyer birthing.

Finally, the group had a very easy eight hour first labour up in the Adelaide Hills attended by a midwife, with the doctor just arriving in time to deliver the baby.

Our group's experience demonstrates how difficult it is to get medical support, doctors tending to insist on midwife support, and *vice versa*, with both wanting hospital back-up in case of emergency. In most Australian capital cities, doctors and/or midwives are available. See the list of contacts at the end of this article.

Professional fear of legal hassles is basically unfounded, provided "all reasonable care" has been taken. Home birth is definitely *not* illegal — so far! A move to deregister nurses in New South Wales who attend home births must be strenuously opposed.

Midwives would be wise to take out an insurance cover with Lloyds (\$100 for \$100,000 cover) and doctors some similar medical insurance. For people in more remote rural areas, assistance and back-up in an emergency may be more difficult to arrange. It is well to remember that all ambulance and Flying Doctor Service personnel are trained in emergency childbirth and often have humidicribs available on request, which they will bring to the home.

The most serious complication for the mother is haemorrhage after delivery and, even then, there is

ample time.

"In a large series of cases Beecham found that the average interval between delivery and death was five hours and 20 minutes. No woman died within one hour and 30 minutes of giving birth. This suggests there is adequate time for an effective therapy, *if the patient has been observed carefully*, the diagnosis (of haemorrhage) made early, and a proper treatment instituted."

(Quote from H.O.M.E. Manual, p57.)

The key to successful home birth, as the Dutch experience has shown, is good ante-natal care, with special emphasis on diet, exercise, breathing etc. Admittedly, the subject of diet is controversial, but most *Earth Garden* readers would agree that all foods eaten during pregnancy should be as whole, organic and natural as possible. Food additives and pesticide-sprayed foods should be avoided, since most cross the placental barrier and end up in your baby.

Being macrobiotic eaters ourselves, we tend to believe that an excessive consumption of sugar and raw fruits, especially *tropical* fruits — which are used in Malaya as abortifacients — is implicated in premature delivery and that it is best to avoid dairy food during pregnancy lest the baby be born with mucous problems. Grains, beans, vegetables, nuts, fruits in season and locally-grown, perhaps fish or fowl if you can get it uncontaminated, all comprise a balanced diet.

Raspberry tea should be your regular drink. It seems to have parturient properties and tastes like ordinary tea if you make it strong enough. The most important exercise is squatting, which should especially be practised during excretion.

It is essential to know whether you are at high risk through a past history of diabetes, cephalo-pelvic disproportion, pre-eclampsia or eclampsia (the toxemias of pregnancy), ante-partum bleeding, or complication in previous pregnancies (provided these weren't due to iatrogenic hospital interference!). The H.O.M.E. Manual has a comprehensive coverage.

Professional checking of the baby's position in the days immediately prior to labour is important: with the baby's head engaged in the anterior position, one would have great confidence in a normal, fairly fast, labour. Transverse and posterior positions may well right themselves during labour, and are *not* a contra-indication to home birth. Breech positions usually *are*, although *The Farm* midwives in Tennessee, USA, are now successfully managing breech deliveries.

One of the premises of home birth is a very high involvement of the father in the birth itself and in caring for his wife in the essential rest period after the birth. Recent studies have emphasised the maternal-infant bondage in the minutes after birth, to the neglect of the almost as important paternal-infant and sibling-infant relationships, which are so much easier to establish in the home setting.

We spent the first few days after Boronia's birth continually stroking and massaging her. This is also the time to start the family bed, the return to traditional sleeping of child and parents. Read: *The Family Bed*, by Tine Thevenin, PO Box 16004, Minneapolis, Mn.55416, USA, if you are interested in this.

Studies have shown that the first 20 minutes after birth are crucial for the sucking reflex, and parents can make sure their newborn is fed only colostrum and none of the glucose water the hospital nursery offers to its charges. True "demand" feeding from the beginning

is possible so easily in the home context.

In summary, home birth is truly *natural* childbirth.

In our society, labour and birth are viewed negatively as potentially painful, even agonising experiences. Much as we wish to escape the negative cultural conditioning, we may feel it residually and unconsciously through our own mother's attitudes.

Grantly Dick-Read has written of the fear-tension-pain syndrome which causes painful contractions in labour and is counter-productive. Facing up to one's fears and negative feelings well beforehand is an important part of preparation for a successful home birth. Often admitting these feelings will help disperse them and then, the experience itself being so joyful and positive, will banish them forever!

One of the functions of a Support Group is to get couples planning home births to talk about their fears and hopes with each other, a feature sadly lacking in most ante-natal classes. Our group also plans to start Alternative Ante-Natal Classes as a step towards greater self-sufficiency.



Vivien, Stuart & Boronia.

APPENDIX

Equipment

Minimal equipment for a home delivery is listed in *The H.O.M.E. Manual* and *Spiritual Midwifery*.

Briefly, we needed a big rubber groundsheet over the double bed, lots of sheets and rags sterilised in the oven, a big roll of absorbent bandage for soaking up discharges after the birth, lots of sanitary pads for the lochia, a pair of cord clamps (about \$15 at a surgical instrument supplier), shoestring to tie the cord, an oxygen cylinder rented from C.I.G. to suction out mucous (you can use a disposable mucous extractor instead — our doctor insisted on the cylinder for resuscitation).

Also needed is a baby bath for the Leboyer bath, herbal antiseptic for tears and the cord stump, a stop-watch and sphygmomanometer for timing the baby's heart rate and measuring the mother's heart rate and blood pressure, a bed pan to receive placenta and a telephone nearby.

Books

The best support comes from other people who've had a home birth or are planning one, so we've appended a list of home birth contacts which we know of in Australia. You might also like to get in touch with *H.O.M.E.* (Home Oriented Maternity Experience), 511 New York Avenue, Takoma Park, Washington, DC 20012, USA, whose newsletter and manual are very radical.

Books are the next best friend, and all those listed below are available rapidly (pay by bank cheque) from *I.C.E.A. Supplies Centre*, PO Box 70258, Seattle, Washington 98107, USA, if not available in alternative bookshops.

We recommend reading:

The H.O.M.E. Manual, the best all-round guide to home birth.

Emergency Childbirth, by Gregory White: ("In over 95 per cent of the cases of emergency childbirth, though the emergency attendant will be overwhelmed with gratitude and widely praised as a hero, he can smile within himself at the knowledge that his simple tasks could have been performed by any bright eight-year-old"). Written for police.

Spiritual Midwifery, by Ina May and The Farm midwives, the most inspiring and spiritual book on homebirth.

The Rural Midwives Handbook, originally for the barefoot doctors in China (one could use this Teaching Manual to train in lay-midwifery).

The Birth Book, by lay-midwife Raven Lang, very graphic, showing deliveries squatting and on all fours.

Safe Childbirth, by Kathleen Vaughan.

Childbirth Without Fear, by Grantly Dick-Read, for natural childbirth.

The Continuum Concept, by Jean Liedloff.

Touching, by Ashley Montague.

The Feeling Child, by Arthur Janov, for the broader context.

Contacts

Home Birth Support Group, PO Box 63, Norton Summit, SA, 5136. Phone: (08) 30 3545.

Meetings held fortnightly, first and third Thursday nights of each month at 8 Wakefield Street, Kenttown, Adelaide.

Homebirth, CI- Community Education Centre, Princess May Building, Crn Cantonmant and Edwards Sts, Fremantle, WA.

Founded by Henry Ligtermoet, who has organised over 118 home births in WA in the past 20 years and is writing a book on the subject.

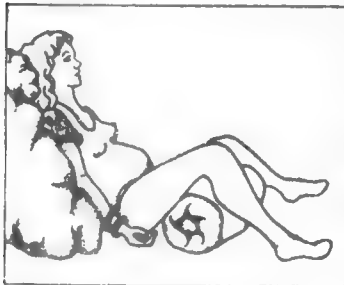
Home Birth Information Service, CI- Parents Centres Australia, 83 Albert Drive, Killara, Sydney, NSW, 2071. Phone: Jan Smith 31 2028.

Childbirth Education Association, 121 Warrigal Road, Oakleigh, Victoria, runs a home birth referral system on contact for a doctor who attends home births.

Boothville Hospital, run by Salvation Army, 43 Seventh Avenue, Windsor, Brisbane. The nearest thing to home birth available in Queensland and has medical staff who may be amenable to a home delivery.

MEDIUM BREATHING

For use during the slightly longer and stronger contractions that develop as the first stage of labour is established and the cervix begins to dilate.



B After about 4 breaths in level A, move up to B. For this you breathe in and out through your mouth to the level of the lower ribcage with the tip of the tongue resting on the roof of your mouth, ensuring that lips are soft and open.

SHALLOW BREATHING

For use as contractions become more intense during the dilation of the cervix.



C Move up from level A, through B to C. For this depth you breathe in to breast level. As you exhale push breath out through the mouth, saying "hout".

Naturebirth

Attitudes to birth are receiving a welcome re-appraisal by many people.

The media is giving generous coverage to natural birth, home delivery and breast feeding. So Penguin Books has timed well its release of some "natural birth books" — all designed to help mothers be more informed and so less frightened by the whole ritual of birth.

From Woman to Woman by Lucienne Lanson — a gynaecologist's explanation of the workings of a woman's body. Recommended price \$2.50.

The Everyday Miracle, by Lennart Nilsson, Axel Ingelman-Sunderb & Clues Wirsén. A photographic look at the embryo and an obstetrician's advice on childbirth. The complete story. Rec price \$3.95.

Naturebirth, Preparing for natural birth in an age of technology, Danae Brook. Rec price \$2.95.

In *Naturebirth*, Danae Brook tries to make women more aware of the practices which usually take place at present during pregnancy and labour and of the possibilities for a different kind of experience. The result is a useful handbook.

The first section examines the various delivery methods — home and hospital — the drugs and machines used and the roles both parents play during birth. It explains simply and clearly the effects of many sedatives and analgesics, their doses and likely results on mother and child. This is an excellent preparation for hospitalisation, so that the right drug may be chosen by the mother if needed.

It also details briefly the newer alternatives, the methods of Laing and Leboyer and Fehr's rebirthing — enabling prospective parents to make an informed choice for their "birth-day".

Unfortunately, Danae Brook here mixes in too much of her own experiences, which tends to make dreary reading, but it is worthwhile persevering, especially to those to whom all these facts and ideas are new.

The second section of the book covers the physiology of birth, including an illustrated technique appendix. It encourages group and self preparation for

a more relaxed delivery and the resulting more contented mother, child and father.

Although Danae Brook and *Naturebirth* are English, the Australian edition has many addresses and contacts for childbirth groups, a further reading list and a few herbal supplies.

Parents Centres promote an exchange of ideas between parents — to help and be helped through child-raising.

The group is actively involved in seeking a better treatment for both parents during and immediately after childbirth, both at home and in hospitals. There are weekly meetings held in Sydney.

Parents Centres strongly advise natural births and psychoprophylaxis and breast feeding. They have an interesting bi-monthly journal, which reports on meetings, submissions and future actions of the group as well as having personal experiences, letters and articles. References are given for further reading and there is also a library for members.

Members are asked to help in various ways, if they feel they can. There are groups to deal with breast feeding, natural birth, twins, prenatal care and there are doctors, nurses, psychiatrists and other professional people on an advisory board.

Family membership: \$5 per year, including subscription. Gift subs \$4 per year, from: Parents Centres Australia, Tina Black, 8 Hollings Crescent, Heathcote, NSW, 2233.

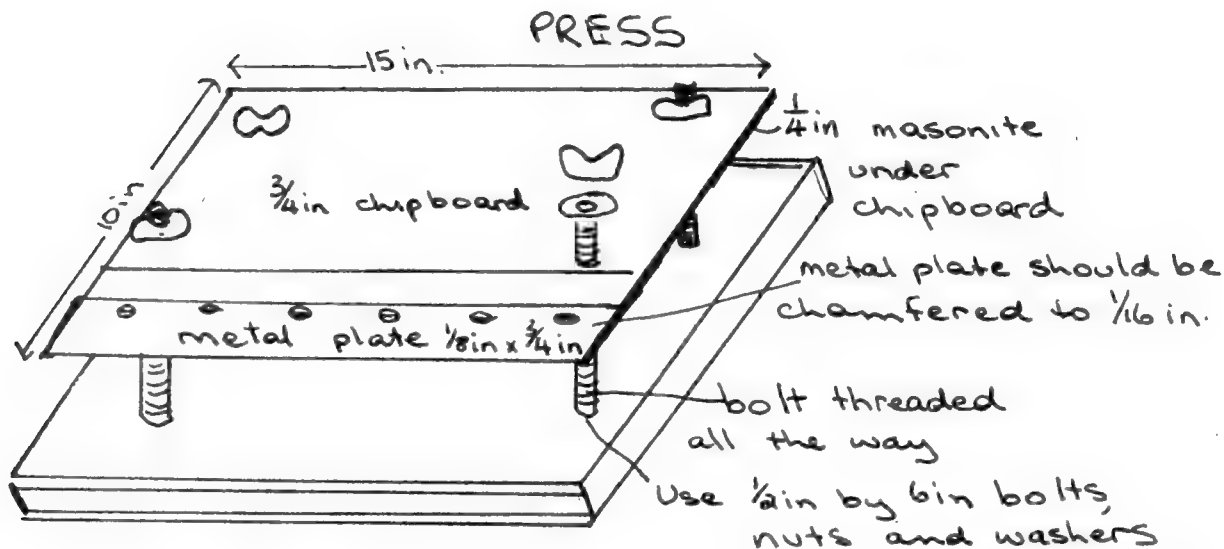
Home birth information from: Jan Smith, 10/1 Farrell Avenue, Darlinghurst, NSW, 2010.

International Childbirth Education Association, based in America, is for those who want to learn more about childbirth. This group has a quarterly publication, *ICEA News*, to keep members informed of developments in family-centred maternity.

Subscription: \$US3 per year, from PO Box 20852, Milwaukee, Wisconsin, 53220, USA.

An Earth Garden cover story

By Peter de Forest



Cover your *Earth Gardens* with plastic? ... sacrilege! Keep them in a box, or leave them under the bed?

Why not protect the most important tool that you own by covering your *EG* issues with leather?

Bookbinding is easy and cheap.

The equipment you need is a press, mallet, knife, large needle, scissors, ruler and short piece of one inch dowel.

The materials you need are all cheap and readily obtainable. They are:

Paper, for endpapers and flyleaf — brown kraft may be used. *Note*: Grain must run from top to bottom of spine. You can tell grain direction easily by tearing a sheet — paper tears more easily and straighter with the grain.

Cloth, crinoline or unbleached muslin.

Thread, a spool of No 25 linen thread.

Beeswax, one cake, for waxing the thread.

Thin masonite or thick strawboard for covers — grain must also run from top to bottom.

PVA glue, aquadhere or similar.

Waxed paper.

CONSTRUCTION

STEP 2: Take each issue, I suggest 10 per volume, remove staples, cover spine with paper and hammer each spine flat with mallet. Then stack in one pile in sets of two alternately. Fold to fore-edge, place a sheet of

waxed paper top and bottom and place in the press as tightly as possible for half an hour. Then relax pressure somewhat and leave overnight.

STEP 2: Remove sections from press and place in correct order. Clamp in press, leaving 1/4 inch projecting. Make four or more unequally-spaced sawcuts with a dull saw 3/32 inch deep, with the top and bottom cuts 3/4 inch from the ends of the spine.

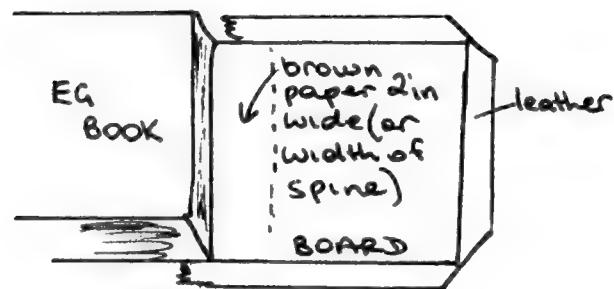
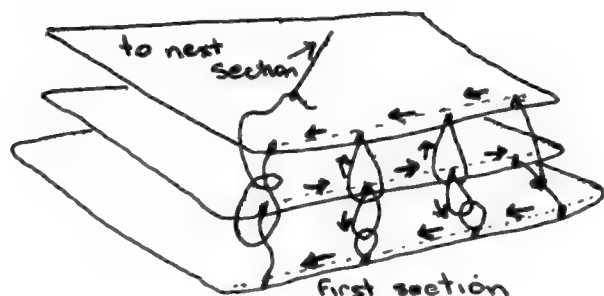
STEP 3: Lay first issue face down on edge of table. Thread needle with three feet of thread. Pass needle through tail sawcut at the head, then draw loops of thread through the other sawcuts with a piece of bent wire.

Lay on the second section, pass the needle in through the sawcut at the head and out through the next sawcut along. Take needle upwards through the loop protruding from the section below and back into the same sawcut. Draw the loop firmly to form the lock stitch.

Finish sewing the section in the same manner and tie threads together at the foot sawcut with a reef knot. All the other sections are sewn in the same manner, except that there are no protruding loops.

To stitch, pass the needle behind the stitch in the next lower section, then back into the section, out at the next sawcut . . . and so on.

At the end of each section, pass the needle behind the thread below and bring it around and up through the loop of thread so formed and draw it tight. On the last



section, finish up with a couple of the above *kettle* stitches down the back, then cut off the thread, leaving two inches of thread.

Note: When you have to add another length of thread, make sure that the knot falls inside a section.

STEP 4: Spine will be much thicker now after sewing. Knock down the spine with a mallet. This embeds the threads in the folds.

STEP 5: Cut endpapers to size, fold in half with the grain. Protect the face of the book (now we can start calling it a book) with paper and paste a 1/4 inch strip down the folded edge. Lay on the folded endpaper and rub down. Do the same with the other side and let it dry in the press.

After drying, if all the sections and endpapers aren't precisely the same size, take the book to your friendly neighbourhood printer and have him guillotine three edges (this may be necessary, as some issues, particularly *EG1*, are *higher* than others — K & I).

STEP 6: Apply a thin coat of PVA, wait until almost dry, then tap the spine into a rounded shape with the mallet. Push in the fore-edge with your thumb while drawing the top sections towards you with your fingers. This must be done before the adhesive has set.

STEP 7: Cover the endpaper with protective paper and place the book in the press, leaving 3/16 in exposed on each side. Tighten clamps as tightly as possible. Make glancing blows with the mallet (covering sections with paper to avoid damage). The idea is to turn the folded edges of the sections towards you.

Work the full length of the spine on each side until you have a smooth, rounded spine, with the edges bent against the metal edges of the press. Apply two coats of PVA, working in well with your fingers. Then, before the glue is dry:

STEP 8: Cut a piece of cloth long enough to reach from the top sawcut to the bottom sawcut and wide enough to overhang 1 1/2 inches each side. Press cloth backing down onto the glue, cover with more glue, then cut a piece of brown paper the size of the spine and also press down on the glue.

STEP 9: Obtain a piece of soft leather of bookcloth. Cut it so that it wraps the book completely, plus 3/4 inch extra all around. Cut strawboard or thin masonite as wide as the body and 1/4 inch longer. Mark a rectangle the exact size that will be covered by the book on the inside face of the leather, then cover with PVA glue.

Cut off four corners within 1/8 in of the corners of the rectangle. Lay the board on the glued leather exactly in position. Then position the body of the book on the board. Cut a piece of brown paper the length of the spine and two inches wide and glue as shown in the diagram.

Lay on the front board so that it overhangs evenly all around, making sure you leave an 1/8 in groove between the back edge of the board and the turn up on the book.

IMPORTANT: Check for squareness in each of these steps. Bring the leather over the back of the board and rub down (with the dowel) all along the edges, making sure it is tight and that all excess glue is squeezed out. Weight these edges, or clamp until the glue dries.

STEP 10: Remove the case from the body and lay it face down on the bench. Turn the leather over the edge all around and rub down, again getting rid of all excess glue. Weight or clamp these edges.

STEP 11: Place the body of the book in the case. Insert waxed paper between the board papers and the boards and wrap another sheet around the book. Place in the grooving jaw of the press and tighten down. Tear away wax paper and shape the corners with a pointed stick. Leave in press for 24 hours.

STEP 12: Separate case from book. Mark the turn-in 3/8 in wide around the open edges of each board and trim with a sharp knife. Then pull out the excess leather and discard. Do not cut turn on spine.

STEP 13: Nearly there! Place wax paper under the board paper and coat the board paper with thin glue. Glue the two inch thread down to the board paper, but make sure that no glue is in the groove. Close the cover, then open and rub paper with your fingers. Replace the sheet of wax paper and glue the second board paper.

STEP 14: Place fresh wax paper between both boards and books. Wrap the complete book in wax paper and place in grooving jaws of the press for 24 hours.

STEP 15: Take the book out of the press and completely cover all the leather so that only the page edges are exposed. Obtain a jar of red and green ink. Dip a stiff brush into the ink and flick the bristles so that droplets fly off the brush onto the edges in a fine pattern. Then repeat with green ink — or spray the edges with gold paint.

STEP 16: The book must be opened in a special manner the first time to avoid "breaking the back" of the volume. Stand the book on its spine and let the covers fall open. Open the book a few sheets at a time at the front and at the back and rub the pages into the groove. Continue doing this until the centre of the book is reached.

The only job left is to apply a title. This is perhaps most effectively done by tooling the spine. Of course, carving or gold leaf is also good.

Now there is only one more thing to do — read, knowing that you will have it for a lifetime.

Tree Planting Time

By JOHN J. ALDERSON

As I write this, it is the season for planting trees. Unless you prepared yourself some months ago, or buy tubed trees, your activities are going to be limited, though by no means stopped.

Winter is the time to plant out deciduous trees, the more important of these being fruit trees. It's also the time to put in cuttings and to collect small trees and shrubs from where you don't want them ready for planting where you do want them.

This last operation can seldom be done directly with any great success. Now this is what I want to talk about . . .

During the previous spring and summer I pricked out, pretty roughly I may say due to the circumstances, well over 100 grey box (*Eucalyptus microcarpa*) from the bottom of my dams. Being the grandfather of droughts, the dams were dried up and the young trees shot in the leaf mould covering the clay.

These I potted into one litre milk cartons using a potted mixture of leaf mould and sandy loam with some coarse gravel at the bottom. When potted they varied from ½ inch to two inches high and as I am now planting out on an average of six months later, they are 18 inches to two feet high. It's interesting to note that the larger seedlings received the greatest shock and are now the smallest.

Most of the grey box are going onto the banks of new dams I have had put down, spaced about eight feet apart. They are mixed with sugar gums (*E. cladocalyx*), white ironbark (*E. leucoxylon* var. *leucoxylon*) and red gums (*E. camaldulensis*).

It may be of interest to mention that these dams have been dug in corners of paddocks and the banks are fenced off by a fence going through the centre of the dam itself. Occasionally other trees have also been used, on one dam a number of wattles and deciduous tamarisk (*Tamarix parviflora*) and carob bean (*Ceratonia siliqua*). These latter overhang the fences and it is hoped that they will provide stock feed later.

The grey box were a windfall. The year suited them, though I doubt if any would have survived had they not been transplanted. Other years red gums or sugar gums are plentiful. I've seen oaks growing by the thousands under their parent trees in parks and the gardener is usually happy for you to take them.

I've seen kurrajongs growing in gutters of towns like grass and this season silky oaks (*Grevillea robusta*) are coming up like a weed in my brother's garden in the town nearby. Palms I've seen by the hundreds. Red gums often grow like hedges along road verges and the shire grader has to chop them out. These are trees you can get for the asking. Potting them is simple.

Firstly, I like to use a litre carton. Place about an inch of coarse gravel in the bottom and fill to within an inch or so of the top with your potting mixture. Make a depression in the soil after shaking it down, prick out the little tree, pop it in and firm around it. Water repeatedly until the potting mixture is soaked right through . . . it takes a day or so. Then put a goodly hole in the side of the bottom and allow to drain.

Larger plants are a little more difficult. Assuming you have one with a root long enough to reach the bottom, put in the gravel, hold the tree in the right position and pour the soil around it, firming it by dumping. Water, and keep watering until the soil is soaked. Larger seedlings may wilt, particularly in summer. I leave them to soak in the water until they recover and start looking happy again, then put in the drainage hole and water every day and keep in the shade.

The Forestry Department nurseries in Victoria, who grow their trees somewhat similarly in a tube, place all their tubes in what amounts to a concrete pit, about one foot deep and packed closely together. The Creswick Nursery is very elaborate, but the Mildura one is more modest and made of moveable concrete slabs which of course can be covered from the sun and frosts.

A similar set-up can easily be made of timber and plastic sheeting so that the pots stop each other from drying out. Watering is ever so much easier. Suggestion: have a plastic sheet that can be raised up to form a water-tight box, pour in sufficient water, leave to soak and allow to drain after a few hours.

Under such conditions a milk carton will last about six to eight months, by which time most trees should have nearly filled them with roots. If the carton is very much decayed I just rip the bottom out of it and plant the lot. If the carton is in reasonably sound condition I rip out the bottom, put it in the hole, put some earth around it and gently pull the carton up from around the tree as I fill in, then just tread the soil tight.

Young trees will need protecting from rabbits and pet sheep (roast mutton just before planting out is my best recommendation) and some trees will need staking as they will not have the strength to stand upright unaided due to their rapid growth. Do not put the stake down through the roots. Planted like this the tree is not in any way disturbed and should continue to grow without any setback. It is wise to make sure the tree has been well soaked prior to planting. Water it first thing after planting.

It pays to visit the Forestry Nurseries now and then, particularly out of season, or very early in the season. I went to Mildura in April and found that they had a lot of trees left over from last year, silky oaks up to two feet high. I bought some of these and repotted them in cartons which gave them a lot more root space as it was still far too dry to think of planting out. I am starting on them now and they are fine big trees and a bargain, as they were bought at normal prices (70c this year) with a discount for quantity, so take your neighbours. Open rooted pines (oh I know a lot of people don't like them, but the wagtails build in them) can be potted in cartons and allowed to grow more if the season proves dry, then planted out with perfect safety when the normal planting of open rooted pines would be disastrous.

Young trees and shrubs can be saved from destruction almost any time of the year. I've got a lot of mine by combing the paddock I've been clearing and putting them where they can grow. A lot of native trees shoot in autumn and can be potted in winter and spring.

Winter is also the time for taking cuttings . . . actually anytime before the buds burst. Almost any deciduous tree will strike, so will a lot of natives.

For example, grevillias are struck from cuttings in commercial nurseries. Melaleucas apparently strike readily. I've heard it said that with the right hormones and a mist spray anything will strike. Hum! I am not going to tell you to do anything I haven't done, but by all means try.

Some plants strike throughout the year. A lot of deciduous plants strike readily in autumn, such as the elderberry (a tree of many uses). Best to strike them in shallow boxes and when they are rooted to plant them into cartons and let them get established.

Seeds of most native plants should be sown in autumn, though some may take several years to come up. Prick out as soon as possible, because every day they send that hairlike tap-root further down and if you break that, the plant's had it. If you can't get them out in a couple of days, wait a couple of months until they have a strong, sturdy root system. You may succeed then . . . in between you won't.

If, like myself, you don't have much water and live in a drought-afflicted area, don't try growing trees that need twice your annual rainfall. Use local trees, or get dry area exotics if you want them. In an 18-inch rainfall I use a lot of Mallee plants (9-10 inch rainfall). They are thriving even in the present drought.

Happy planting.

TROPICUS NURSERY

Dennis Hearne is a specialist in tropical fruit trees who has set up a quarantine station at his own nursery in Darwin. He goes on "search-and-supply" trips to South East Asia to seek out fruit trees of interest and worth in our climate.

Dennis also writes a weekly gardening column in a Darwin newspaper and is the author of *Trees for Darwin Gardens*. His address: Dennis Hearne, Tropicus Nursery, Coconut Grove, Nightcliff, NT, 5792.

(Suggested by Gabrielle Kirby)

DOMES PLANS

Kathi and Tom Vichta of Domebuilders (*EG3 & EG Book*) are still selling dome plans, though they don't make or sell kits or dome parts any more.

"Our plans explain how to get the pieces together yourself," writes Kathi. "We have plans for domes like the ones we used to build and now live in, ie wooden frames, sheet metal covering. Only one change — the plans now cost \$35.00."

Thought from Tom:

Hey! We are running 14 lights and a tape machine off our car battery *free!* Recharges every time we go out.

Kathi and Tom Vichta,
Domebuilders, Diamond Valley, Mooloolah,
Queensland 4553.

EG in 1978

Dear friends,

Many people have asked us about folders to protect their *Earth Garden* issues. Sorry, we haven't yet been able to find any that aren't plastic, so Peter de Forest's guide above is an answer at least for those who can 'do-it-themselves'.

In this issue we continue *The Fruit Garden*, with stonefruit, budding & grafting techniques and more on nut growing. Apples, pears, plums and avocados will be featured in EG20 due in October, as well as growing vegetables.

Our *wood heat* section was given a real impetus because we wrote it in this winter's first real 'cold snap'! We think wood is a valuable energy resource and we welcome any lead to more heater or cooker manufacturers or suppliers.

It looks like 1978 will be another very busy year for us. EG21 in January will be unusual because it will take a look at the EG lifestyle as it affects women today. It will be edited by Irene.

EG22 follows in April, then in July we will publish an extra big issue (EG23 & 24 combined), which will be titled *Australian Access*. This is to be a sourcebook of self-sufficiency in Australia. It will

contain comprehensive listings and evaluations of hardware, tools, books and the sources of supply and ideas you need to live a more independent life. There will be plenty of new material and a wide range of articles in our usual style.

The emphasis will be on Australian content and the coverage will be as comprehensive as we can make it. We need your help to do this, so please let us know of good things we can all share, especially those outside the big cities — whether it's just the name of a local craft shop, or a rave or story on something useful you've found.

A major section in *Access* will be an overview of the Aborigines, the masters of survival in Australia, which we promised in EG1. We are already at work on this.

*We are offering the 1978 subscription now at \$7.00, including postage, so please renew your subscription by filling in the order form opposite, or send us a note with the money. All the back issues of *Earth Garden* are still in print. You can get the 'big packet' of EG1 to EG20 at our special rate of \$27.50 posted.

Peace & love,
Irene & Keith.



EG5: WIND ISSUE — WIND-
MILLS, WIND PUMPS, GENER-
ATORS & SOURCES... RAKU
POTTERY... JUST 9 ACRES
FEEDWELL FOUNDRY...
THE CINVA RAM... TOOLS
FLOWER POTS...
KEEPING FOWLS...
HAMBURGH... MOON
PLANTING... THE BUSH

EG8: GAS POWER —
METHANE... WATER-
WASTE-FUEL-FOOD CYCLE
POWER FROM THE
PIG PEN... GYPSY TRUCK
... BEES, GOATS, 3/4-ACRE
CUMBUNGI HATS...
HARMONY FARM... TAPERS
& CANDLES... FAMILY A-
FRAME... SOURDOUGH...
CONSERVATION KIDS...
COUNTRY COTTAGES

EG11: WATER ISSUE... FARM
DAM... HYDRAULIC RAM...
WATER WHEELS... A
MILLER'S TALE... THE SEED
PRIMER... AT HOME IN
QUEBEC... OKRA...
TOMATOES... SOFT TECH-
NOLOGY... SOLAR SPACE
HEATERS... START WITH
MENS' BOX... BEDS...
GINGER BEER... WINE.

EG14: SELF-SUFFICIENCY —
ROBINSON CRUSOE
THOREAU, HELEN & SCOTT
NEARING THE SHOCK
TRANSITION... THE SHOCK
BARTER... GARDENS
FOR ALL... BOTOBOLAR
GRAPES... ABIGAIL'S
GOATS... BUSH OUT OF
PLACE... SAVE A RAIN-
FOREST... TRY MILLET...
WE BUILT IN STONE.

EG1: MOVE OUT... BACK-
YARD FARM... KIBBUTZ &
MOSHAV... FOOD CO-OP...
MONTSALVAT... EARTH-
WORMS... COMPOST...
MULCH... GROW BEAN
SHOOTS... FRED ROBINSON
... COMFREY... HERBS...
NO DIG.

EG3: MAGIC HERBS... A
COMPOST BOX... GARLIC
SPRAY... KEEPING GOATS...
COMPANION PLANTS...
MUDBRICK BUILDING... JEFF'S
GEODESIC DOMES... BREAD...
WATERWHEEL... SPINNING...
VEGIES... SALADS.

EG6: SOLAR 1 — SCIENCE &
SUN... SOLAR COOKER...
A SUNDIAL... THE LOST
WORLD... CEMENT-RENDER
SHALOM, LAND OF
PLENTY... CAJUN COOKIN'
HEALTHY HORSES... SPIRIT OF
CRYSTAL HILL... GONDWANALAND
NIMBIN... TASSAJARA BREAD.

EG9: GAS POWER 2 — ALTER-
NATIVES TO PETROL... LPG
FUEL... SEPTIC GAS...
MARY'S PLACE... STONE
RUBBLE BUILDING... OATS
... MACROBIOLOGICS...
DUCKS... HORSE & CART
... OLIVES... RUG FRAME
... FRUIT & FLOWER WINES
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MONOCULTURE... HOW TO
KILL A PIG.

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BOTTLING... STORING...
BEAN FEAST... TAHU...
WILD FOODS... TOBACCO
... DIVIDE & MULTIPLY...
PAINLESS DIET... PLANS
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TURY HERBALS (TURNER,
GERARD PARKINSON, HILL,
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DOUGLAS ON THE ART OF
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WITH FOOD?... HYDRO-
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SHEEP... TANNING...
ANDREW'S CANDLES...
DONKEYS... MORE BREAD.

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GOOD COMPANY... LAND
TITLES... MAPS...
ANGORA GOATS... MAKE A
LEATHER BAG & BELT...
MUSHROOMS... START A
SCHOOL... SCHOOL
GARDENS... NATURAL
DYES... MUDBRICKS AGAIN.

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... JARRAH SHINGLES...
MUDBRICKS YET AGAIN...
THE AUTONOMOUS HOUSE...
... BAMBOO FLUTES... BIO-
DYNAMICS... GEESE &
GUINEA FOWL... CHIP
HEATER... A TANDEM...
GAS AGAIN... SQUASH...
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MORE ON GOATS...
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DUCKS... KHAKI CAMP-
BELLS... NETTING...
ASPARAGUS... MAKE SOAP
... THE AEOLIAN HARP...
BIO-CYCLE HOUSE... POLE
SHELTER... PISE IN DARWIN
... DIRT CHEAP... BREED-
ING BLACK SHEEP.

EG18: THE FRUIT GARDEN —
ORANGES & LEMONS...
OTHER CITRUS... TROPICAL
FRUIT... FODDER TREES...
BIRDS & INSECTS... 3000
TREES... BUILD A ROAD...
HOME BIRTH... ASTRO-
LOGICAL PLANTING CHART...
... CINVA-RAM HOUSE...
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WOOD KILN... SUNFLOWER

Have you ever wondered what happened to those people who tossed in their jobs and went bush? They're surviving quite well, and with this book, you can do the same.

Courier Mail, Brisbane



EG BOOK



A roof over your head. Food in your stomach. That's what The Earth Garden Book is all about. In stories chosen from the first 10 issues of Earth Garden magazine, you can find out how to build your house, keep animals and raise organic fruit and vegetables.

Absorbing things to do — like weaving a hat from bulrushes, building a bamboo flute or making a leather bag — are also included, as well as some zany things, like constructing a sundial, or growing loofahs for a bath or dish sponge!

This book may change your life.